Models:

ACM 15 E/ER
ACM 20 E/ER
ACM 25 E/ER
ACM 28 E/ER

A5CM 15 E/ER
A5CM 20 E/ER
A5CM 25 E/ER
A5CM 28 E/ER

ACSON International

Ceiling Convertible Split Systems

ACM - E- 2007

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TABLE OF CONTENTS

1. NOMENECLATURE 1

2. PRODUCT LINE-UP 3

3. FEATURES 6

4. APPLICATION INFORMATION

- OPERATING RANGE 7

- REFRIGERANT CIRCUIT DIAGRAMS 8

- CONTROLLERS 14

- INSTALLATION 18

5. ENGINEERING AND PHYSICAL DATA

- GENERAL DATA 31

- COMPONENTS DATA 45

- SAFETY DEVICES 59

6. PERFORMANCE DATA 63

- PERFORMANCE TABLES 67

7. DIMENSIONAL DATA 87

8. ELECTRICAL DATA 89

9. WIRING DIAGRAMS 97

10. SERVICING AND MAINTENANCE 108

11. TROUBLESHOOTING 110

12. EXPLODED VIEW & PARTS LIST 115

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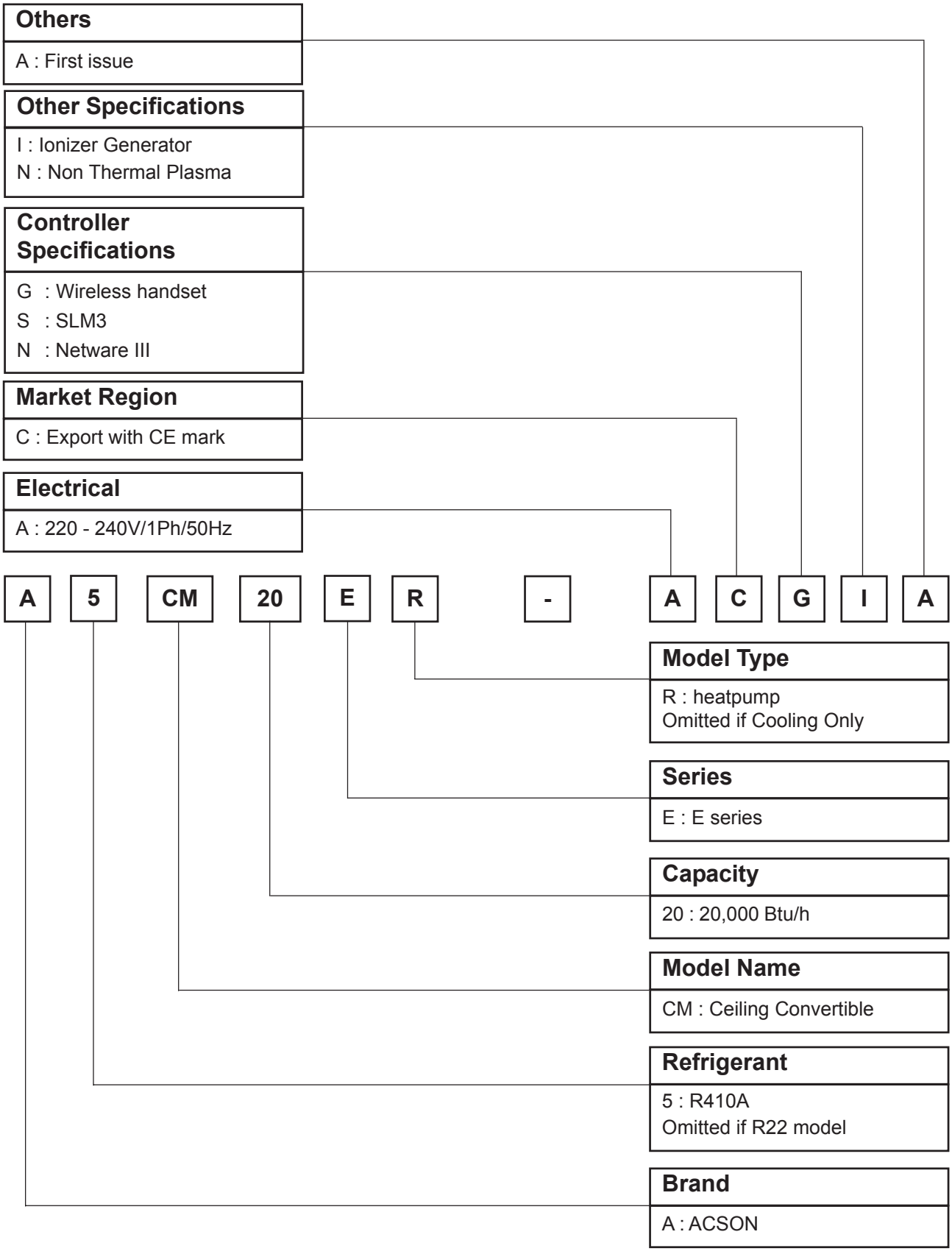
1. NOMENCLATURE

Indoor



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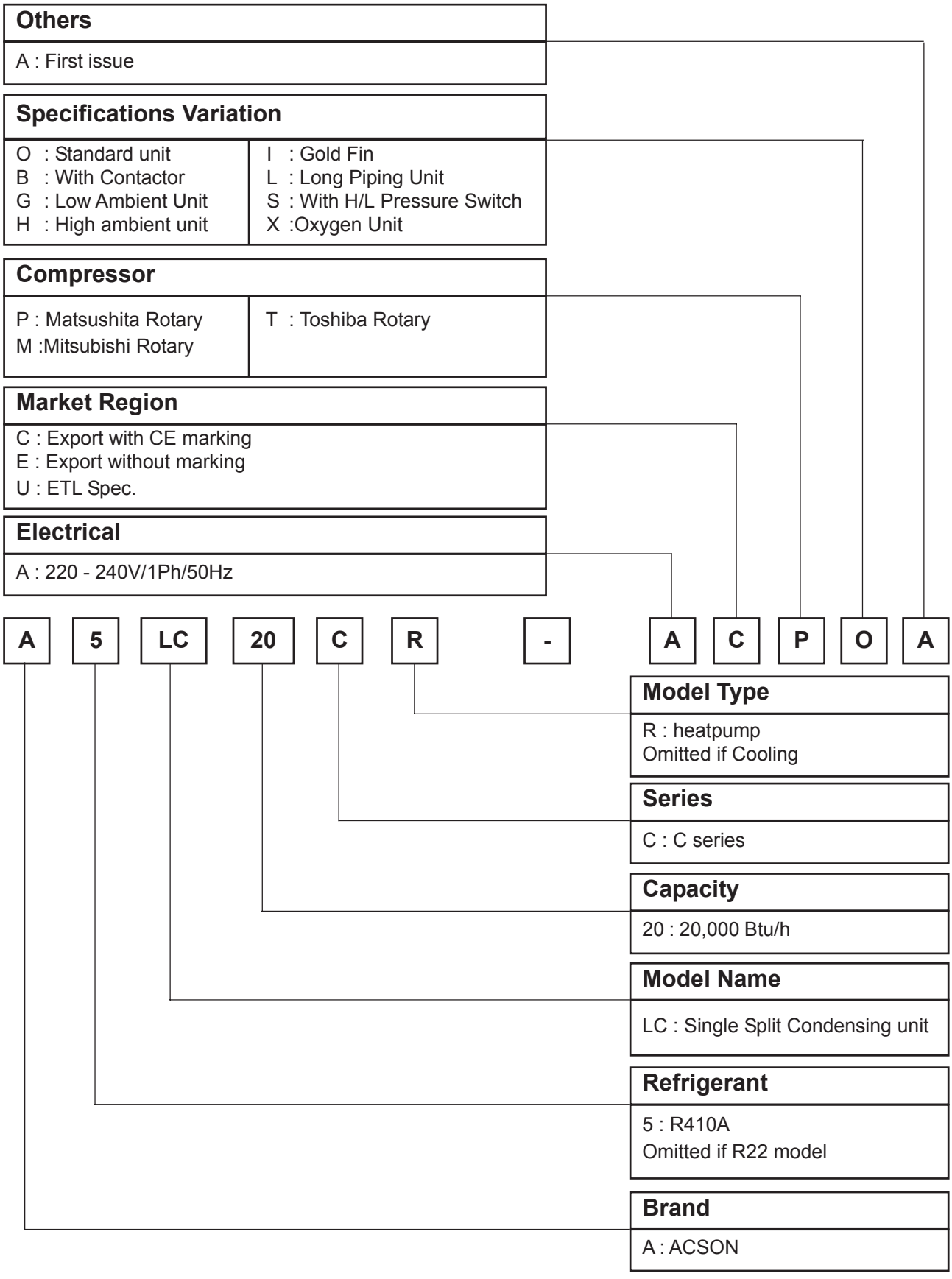
Outdoor



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2. PRODUCT LINE UP

INDOOR UNIT
ACM-E SERIES PRODUCT LINE UP

ACM		Nomenclature	Classification										
			Control Module	Handset			Marking		Fin	Ionizer	NTP	Refrigerant Control	
			L2	SLM3	Netware III	G12 Handset	CE Mark	W/out Marking	Hydrophilic (SLIT)			Cap. Tube	W/out Cap. Tube
Cooling Model	15E	ACGIA	X			X	X		X	X			X
	20E	ACGIA	X			X	X		X	X			X
		ACGNA	X			X	X		X		X		X
	25E	ACGIA	X			X	X		X	X			X
		ACGNA	X			X	X		X		X		X
	28E	ACGIA	X			X	X		X	X		X	
		ACGNA	X			X	X		X		X	X	
Heat Pump Model	15ER	ACGIA	X			X	X		X	X			X
	20ER	ACGIA	X			X	X		X	X			X
		ACGNA	X			X	X		X		X		X
	25ER	ACGIA	X			X	X		X	X			X
		ACGNA	X			X	X		X		X		X
	28ER	ACGIA	X			X	X		X	X			X
		ACGNA	X			X	X		X		X		X

A5CM-E SERIES PRODUCT LINE UP

A5CM		NONMENCLATURE	Classification										
			Control Module	Handset			Marking		Fin	Negative Ionizer	NTP	Refrigerant Control	
			L2	SLM3	Netware III	G12 Handset	CE Mark	W/out Marking	Hydrophilic (SLIT)			Cap. Tube	W/out Cap.Tube
Cooling Model	15E	ACGIA	X			X	X		X	X			X
	20E	ACGIA	X			X	X		X	X			X
		ACGNA	X			X	X		X		X		X
	25E	ACGIA	X			X	X		X	X			X
		ACGNA	X			X	X		X		X		X
	28E	ACGIA	X			X	X		X	X			X
		ACGNA	X			X	X		X		X		X
Heat Pump Model	15ER	ACGIA	X			X	X		X	X			X
	20ER	ACGIA	X			X	X		X	X			X
		ACGNA	X			X	X		X		X		X
	25ER	ACGIA	X			X	X		X	X			X
		ACGNA	X			X	X		X		X		X
	28ER	ACGIA	X			X	X		X	X			X
		ACGNA	X			X	X		X		X		X

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OUTDOOR UNIT
ALC-C SERIES PRODUCT LINE UP

ALC		Nomenclature	Classification														
			Refrigerant Ctrl + Fin			Special		Safety Devices					Grille	Compressor		Marking	
			Cap. Tube	TXV	Gold Fin	High Ambient Kit	Low Ambient Kit	Contactor	High Pressure Switch	Low Pressure Switch	Nantong Press. SW	Phase Sequencer	Drain Elbow	Copeland Scroll Comp.	Rotary	CE Marking	ETL
Cooling Model	15C	ACPOD	X												X	X	
		ACPID	X		X										X	X	
		ACPBD	X					X							X	X	
		ACPYD	X		X			X							X	X	
	18C	ACPOD	X												X	X	
		ACPID	X		X										X	X	
	20C	ACPOD	X												X	X	
		ACPID	X		X										X	X	
	25C	ACPOD	X												X	X	
		ACPID	X		X										X	X	
	28C	ACPOA													X	X	
		ACPIA			X										X	X	
	30C	AFGE						X	X	X	X			X		X	
		AFGF				X		X	X	X	X			X		X	
		AFGG			X			X	X	X	X			X		X	
		FFGE						X	X	X	X	X		X		X	
		FFGG			X			X	X	X	X	X		X		X	
Heat Pump Model	15CR	ACPOB	X												X	X	
		ACPIB	X		X										X	X	
	18CR	ACPOD	X												X	X	
		ACPID	X		X										X	X	
	20CR	ACPOD	X												X	X	
		ACPID	X		X										X	X	
	25CR	ACPOD	X												X	X	
		ACPID	X		X										X	X	
	28CR	ACPOA	X												X	X	
		ACPIA	X		X										X	X	
	30CR	AFFB	X	X				X	X		X		X	X		X	
		AFFC	X	X		X		X	X		X		X	X		X	
		AFFD	X	X	X			X	X		X		X	X		X	
		FFFB	X	X				X	X		X	X	X	X		X	
		FFFD	X	X	X			X	X		X	X	X	X		X	

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OUTDOOR UNIT
A5LC-C SERIES PRODUCT LINE UP

A5LC		Nomenclature	Classification														
			Refrigerant Ctrl + Fin			Special		Safety Devices					Grille	Compressor		Marking	
			Cap. Tube	TXV	Gold Fin	High Ambient Kit	Low Ambient Kit	Contactor	High Pressure Switch	Low Pressure Switch	Nantong Press. SW	Phase Sequencer	Drain Elbow	Copeland Scroll Comp.	Rotary	CE Marking	ETL
Cooling Model	15C	ACPOC	X												X	X	
	20C	ACPIA	X		X										X	X	
		ACPOA	X												X	X	
		FCPOC	X					X							X	X	
		FCPIC	X		X			X							X	X	
	25C	ACPIA	X		X										X	X	
		ACPOA	X												X	X	
		FCPOC	X					X							X	X	
		PCPIC	X		X			X							X	X	
	28C	ACPOA	X												X	X	
		ACPIA	X		X										X	X	
		FCPOA	X					X							X	X	
		FCPIA	X		X			X							X	X	
	35C	ACCOA	X	X				X	X	X				X		X	
		ACCIA	X	X	X			X	X	X				X		X	
		FCCOA	X	X				X	X	X	X	X		X		X	
Heat Pump Model	15CR	ACPOC	X												X	X	
	20CR	ACPIA	X		X										X	X	
		ACPOC	X												X	X	
		FCPOC	X					X					X		X	X	
		FCPIC	X		X			X					X		X	X	
	25CR	ACPIA	X		X										X	X	
		ACPOC	X												X	X	
		FCPOC	X					X					X		X	X	
		FCPIC	X		X			X					X		X	X	
	28CR	ACPOA	X												X	X	
		ACPIA	X		X										X	X	
		FCPOA	X					X					X		X	X	
		FCPIA	X		X			X					X		X	X	
	35CR	ACCOA	X	X				X	X	X				X		X	
		ACCGA	X	X	X			X	X	X				X		X	
		FCCOA	X	X				X	X	X	X	X	X	X		X	
		FCCGA	X	X	X			X	X	X		X	X	X		X	

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3. FEATURES

Ceiling And Floor Installation Option

The unit is uniquely designed with the option to install either below the ceiling or mounted at low wall position without any modification needed. Furthermore, the unit is design adds a touch of elegance to suit any interior design requirement

Excellent Air Distribution

The louver with automatic air swing function fully optimize the room comfort by enables the air flow to be evenly distributed into the room from the front discharge area.

Negative Ion Generator

ACSON emphasis on provide indoor air quality solution. Therefore, the negative ionizer technology is being brought in as an essential part of the unit. The negative ion generator increases the amount of negative ion in the air-conditioning area, creating a refreshing and healthy living environment.

Easy Installation

The ceiling convertible fan coil unit is easily installed with a very economical and space saving installation. No need renovation on wall or ceiling for installation. This easy to install and ready to operate unit ensure rapid and low installation cost.

Magnificent Serviceability

The blower, fan motor assembly and electrical parts can be inspected and air filter can be accessed by pulling down the air intake grille. During servicing or repairing, only the bottom panel needs to be removed in order to access the fan motor, blower, control box piping connection and drain pan.

Wireless Remote Controller

The standard unit comes with a simple, user friendly and stylish wireless controller. The G12 controller offers many features:

- The compact LCD transmitter is able to operate the indoor unit within 9 meters of distance.
- Fan speed can be set at low/medium/high or automatic.
- Sleep mode auto control will gradually increase or decrease the set temperature to provide a comfortable surrounding for sleeping.
- The real time timer allows the unit to be switched ON and OFF automatically based on user settings.
- Ionizer or non-thermal plasma is available to create better air quality.
- Turbo mode function is available to enables the required set temperature to be achieved in a short time.
- Personalized Setting allows user to preset and store 2 groups of personal settings (including timer setting) in the handset.

Auto Random Restart

Auto random restart function allows the unit to automatic restart as the last setting condition when the power supply is resumed after power failure. However, the compressor will restart randomly if more than one unit is installed and sharing the same phase of power.

Self Diagnosis

The microprocessor provides the possibility to detect and diagnose any fault or malfunction that occurs in the system. The error will be reflected by the blinking of the LED lights.

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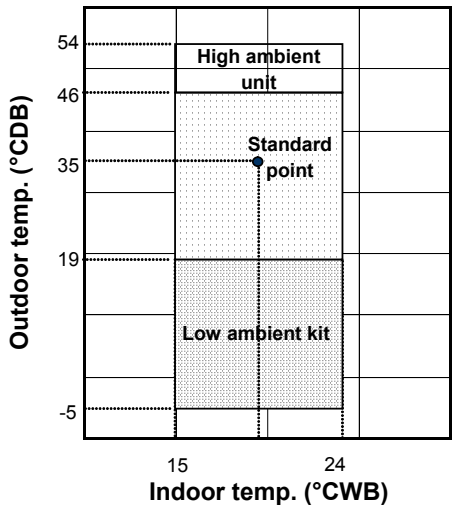
4. APPLICATION INFORMATION

Operating Range

Ensure the operating temperature is in allowable range.

Cooling only

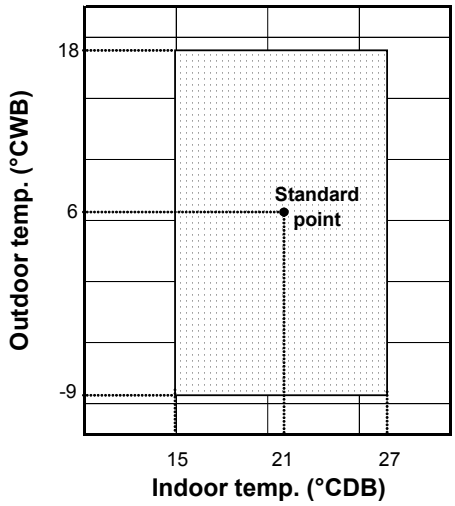


Caution :

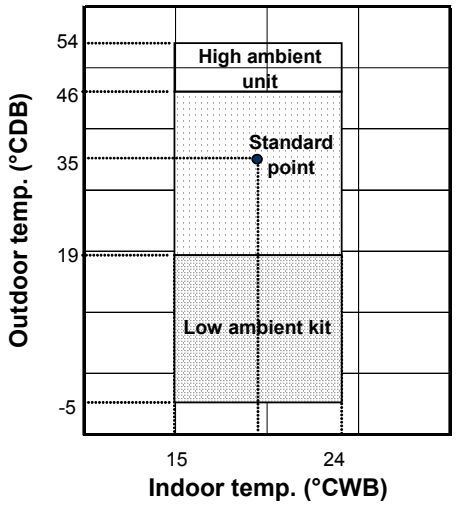
The use of your air conditioner outside the range of working temperature and humidity can result in serious failure.

Heatpump

Heating



Cooling



Note :

Standard operating range.

With High ambient unit. (Optional item)
Please refer to local dealer for unit of this specification.

With Low ambient kit. (Optional item)
Please refer to local dealer for unit of this specification.

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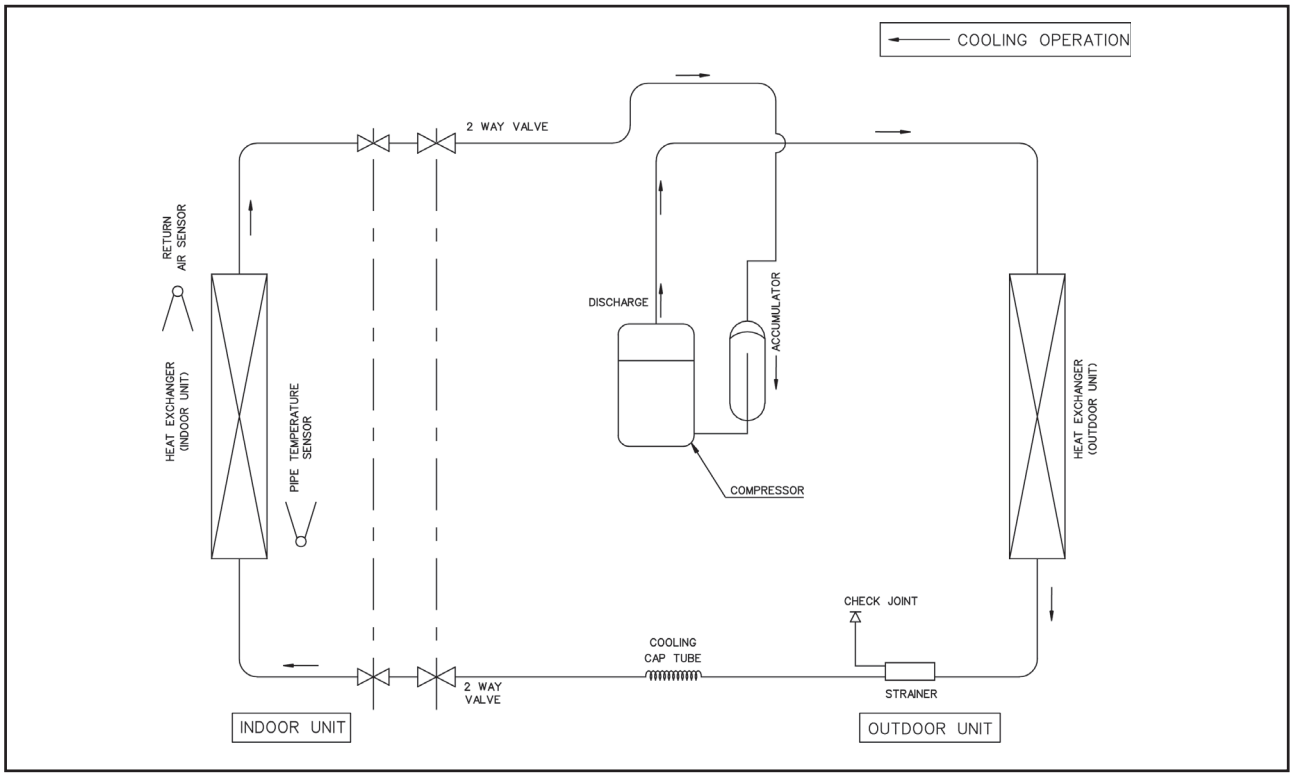
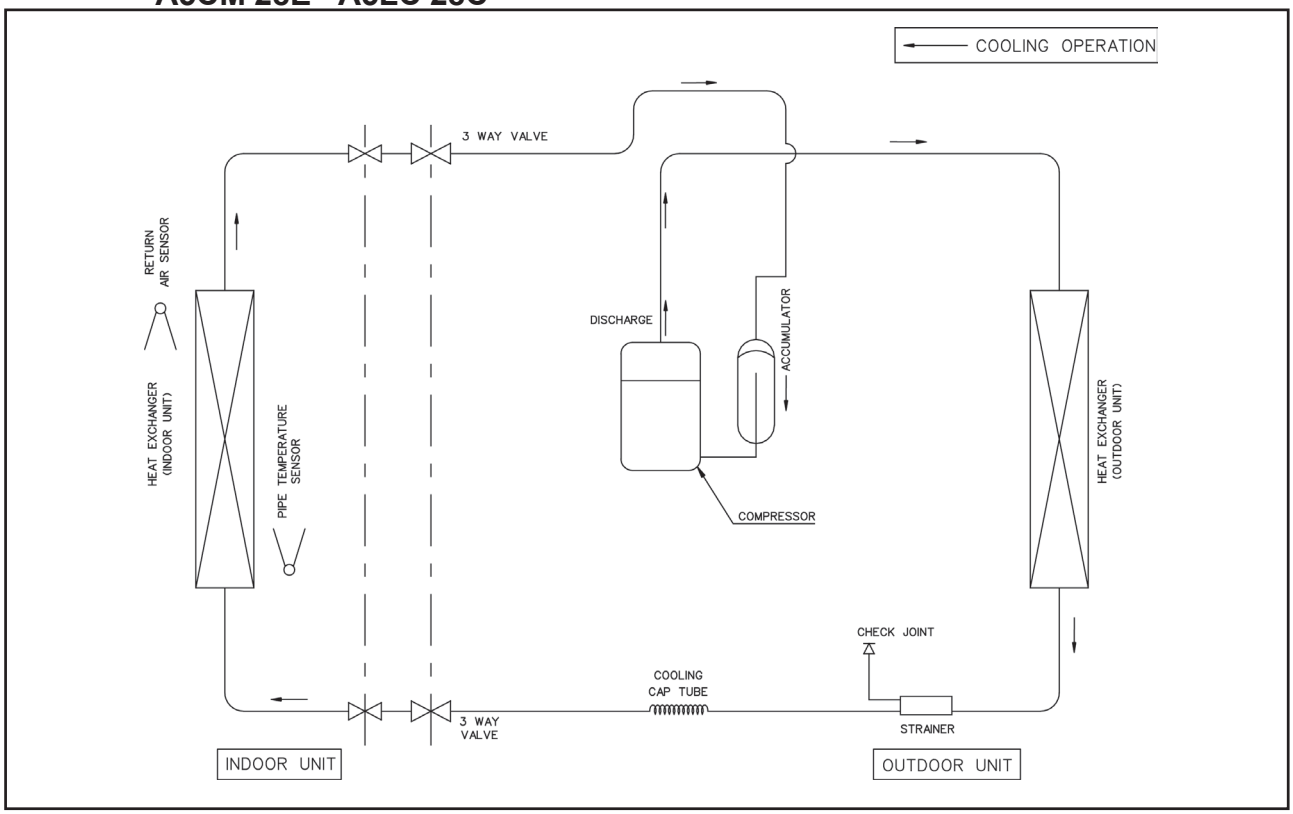
Refrigerant Circuit Diagrams

MODEL : ACM / A5CM 15E - ALC / A5LC 15C
ACM / A5CM 20E - ALC / A5LC 20C
ACM 20E - ALC 18C
A5CM 25E - A5LC 25C



MODEL : ACM 25E - ALC 25C
A5CM 28E - A5LC 28C



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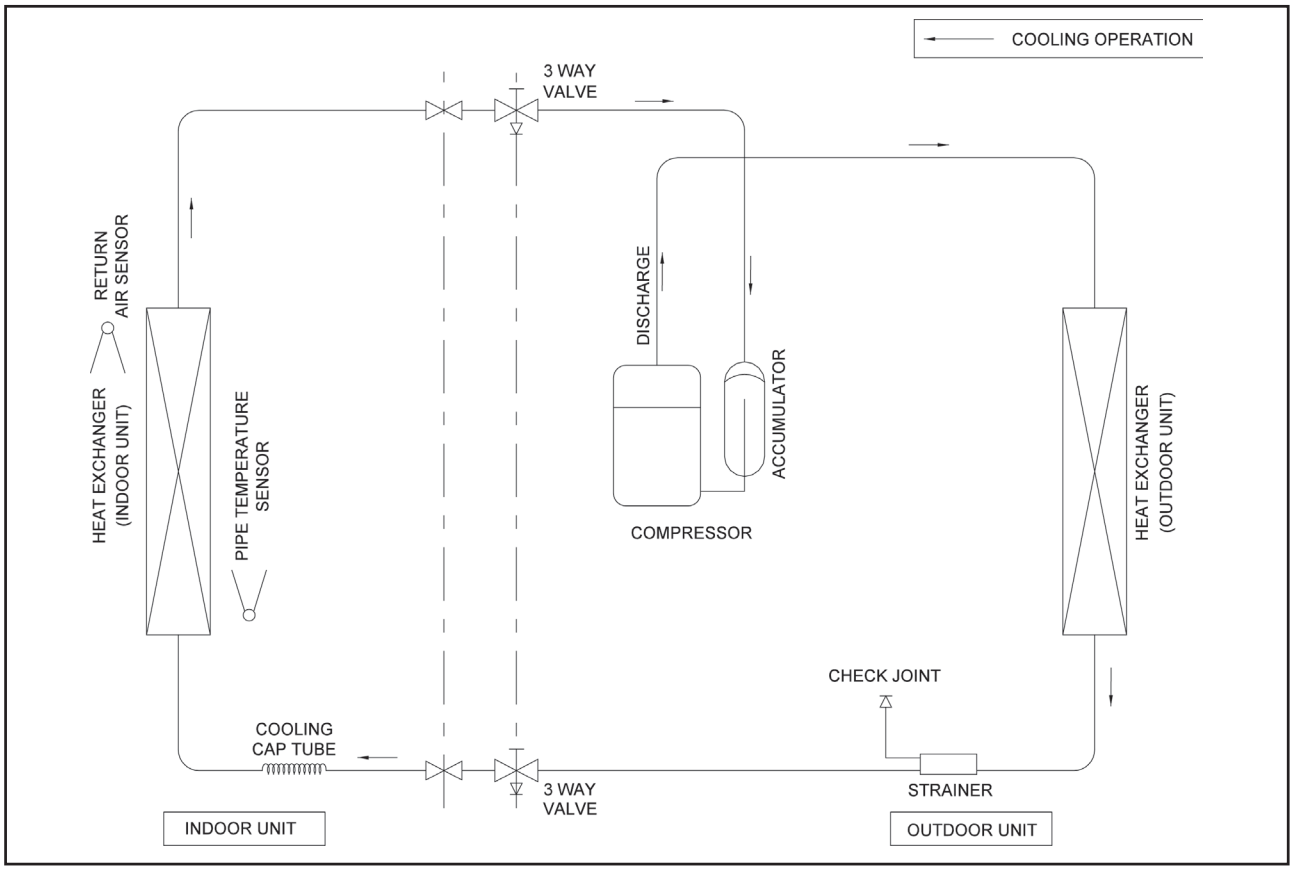
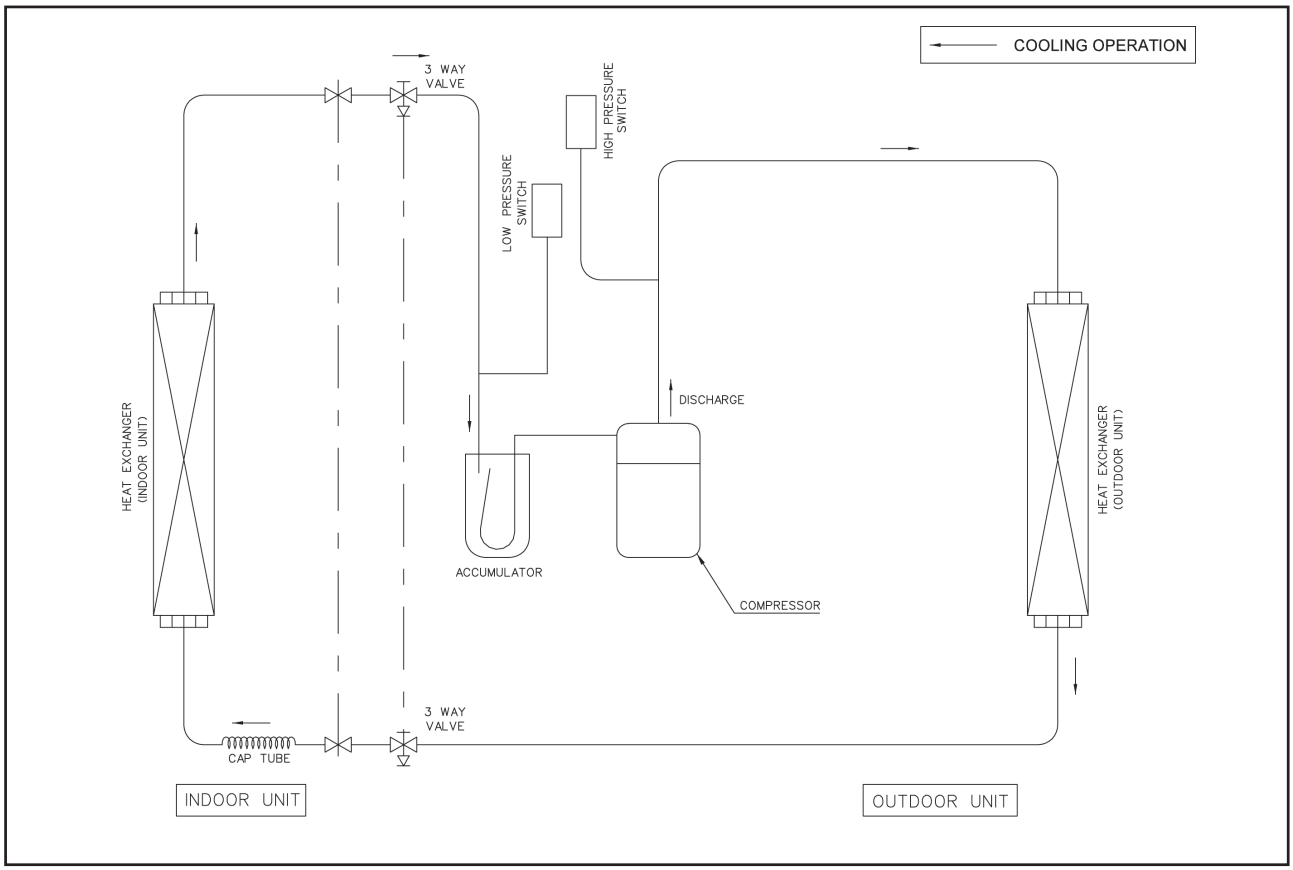
MODEL : ACM 28E - ALC 28C



MODEL : ACM 28E - ALC 30C



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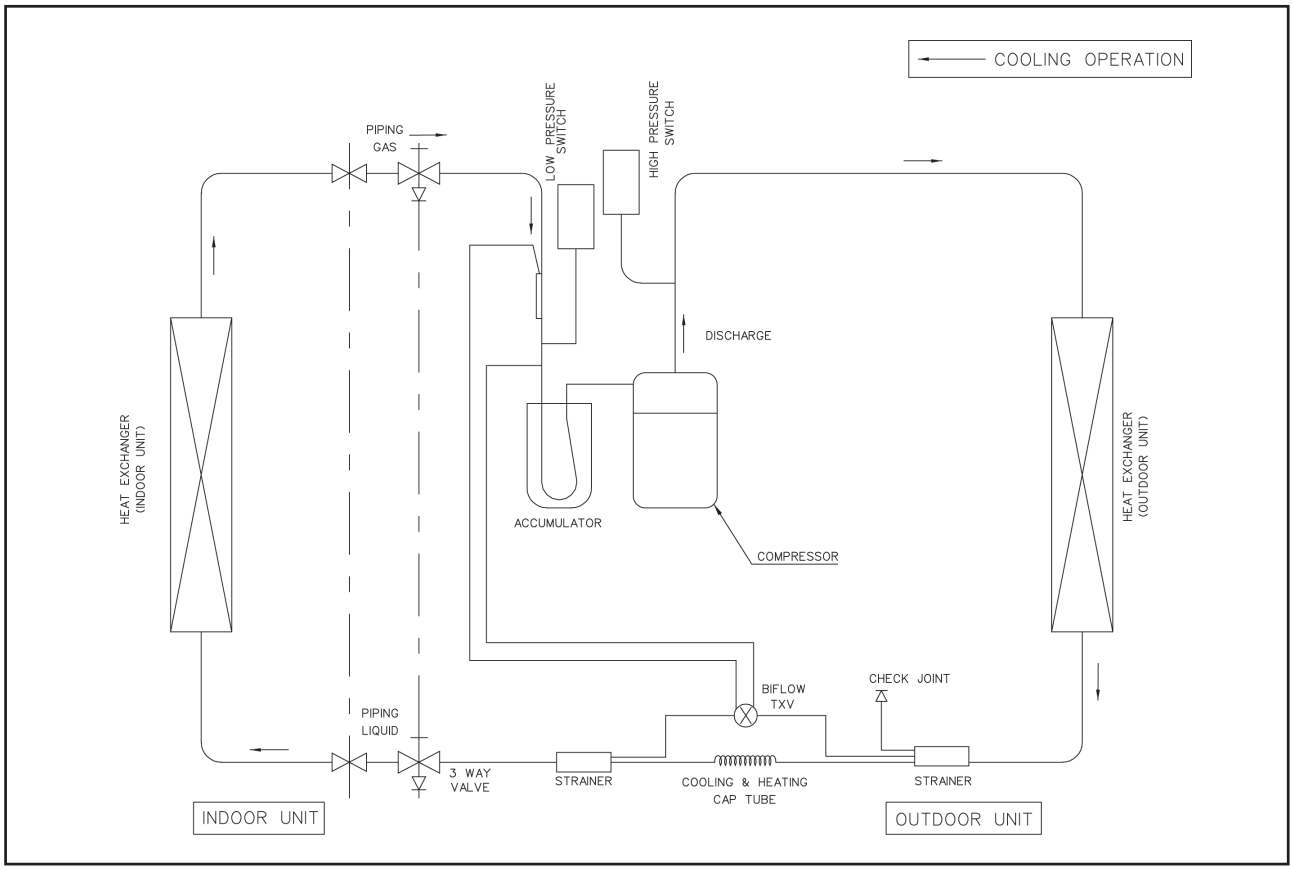
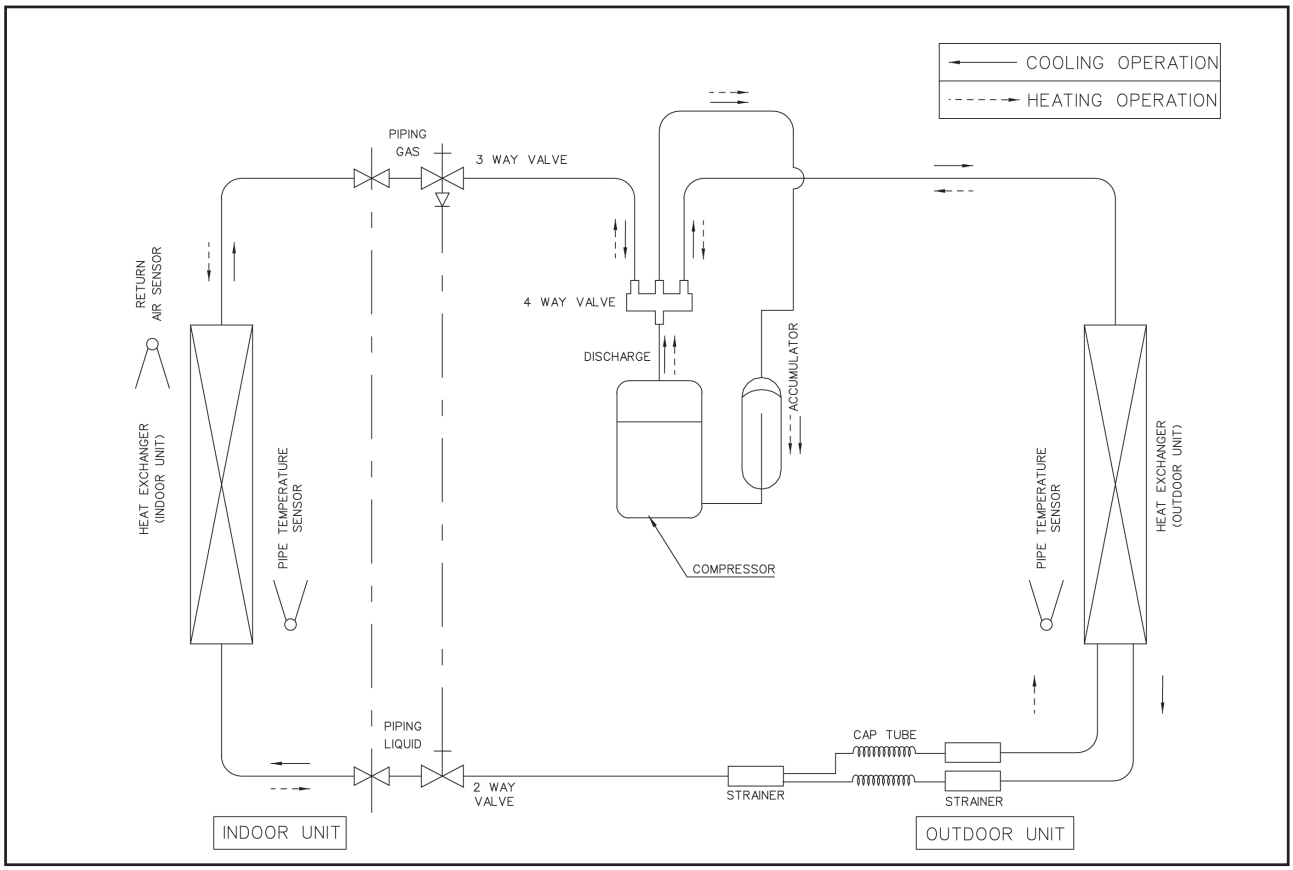
MODEL : A5CM 28E - A5LC 35C



MODEL : ACM / A5CM 15ER - ALC / A5LC 15CR



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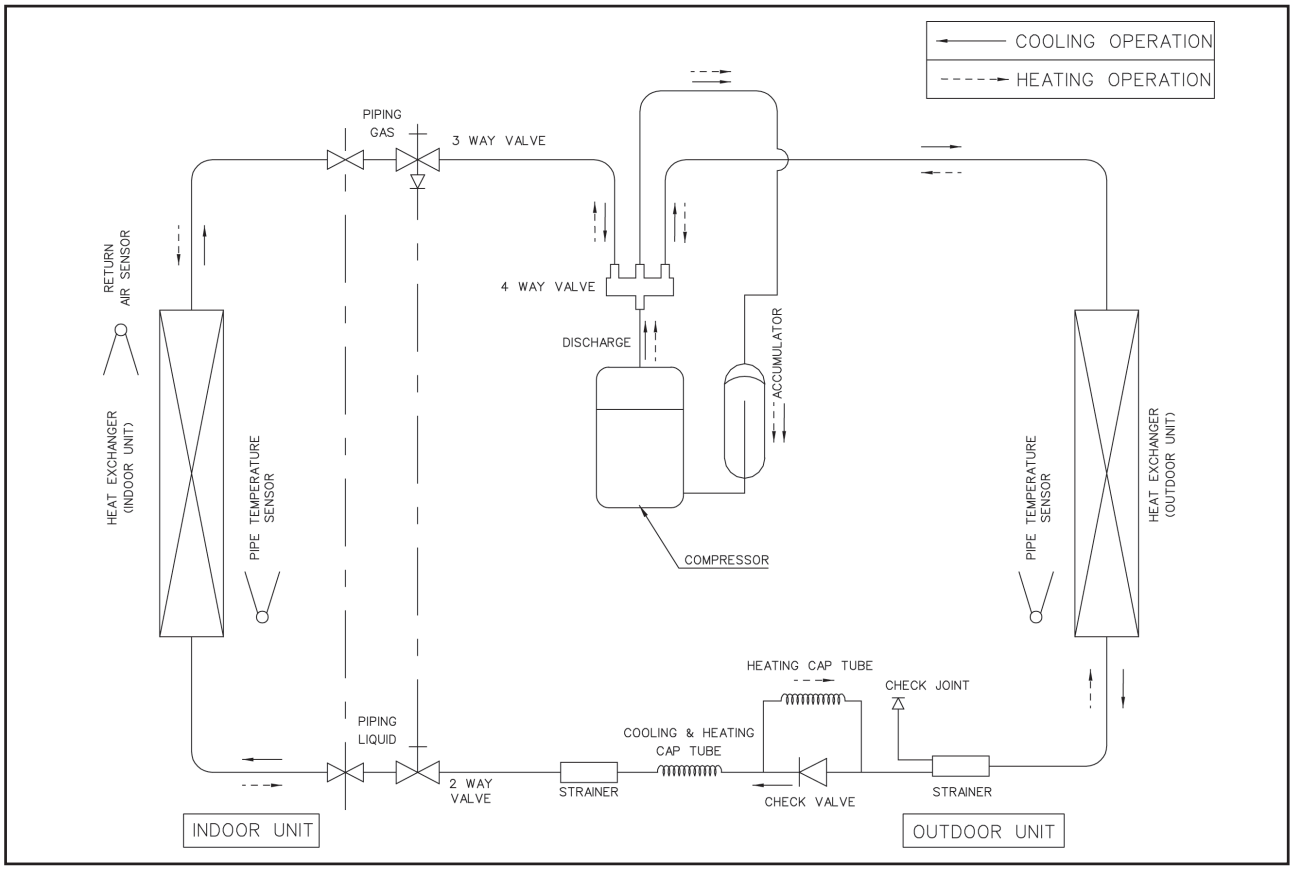
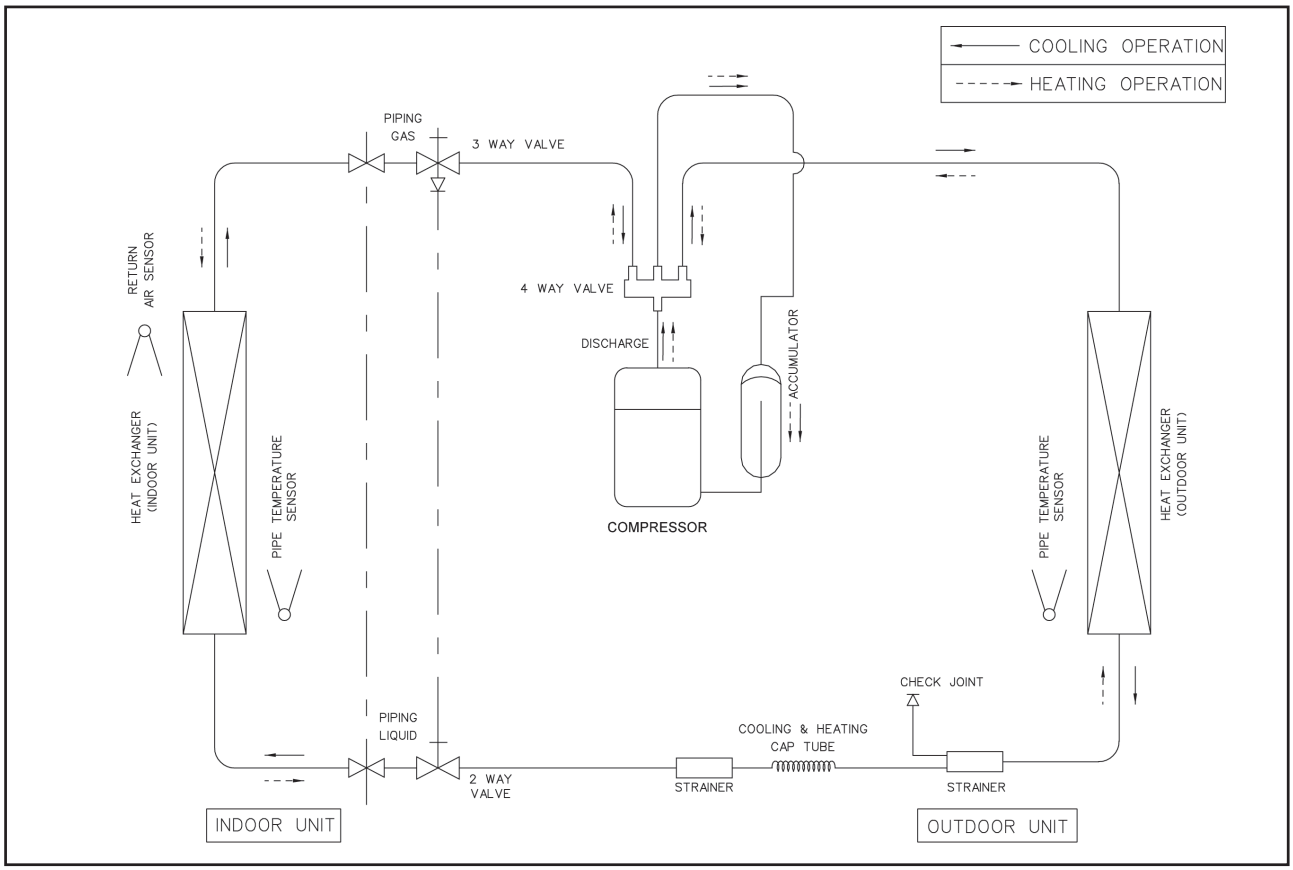
MODEL : ACM / A5CM 20ER - ALC / A5LC 20CR
A5CM 25ER - A5LC 25CR



MODEL : ACM 25ER - ALC 25CR ACM 28ER - ALC 28CR



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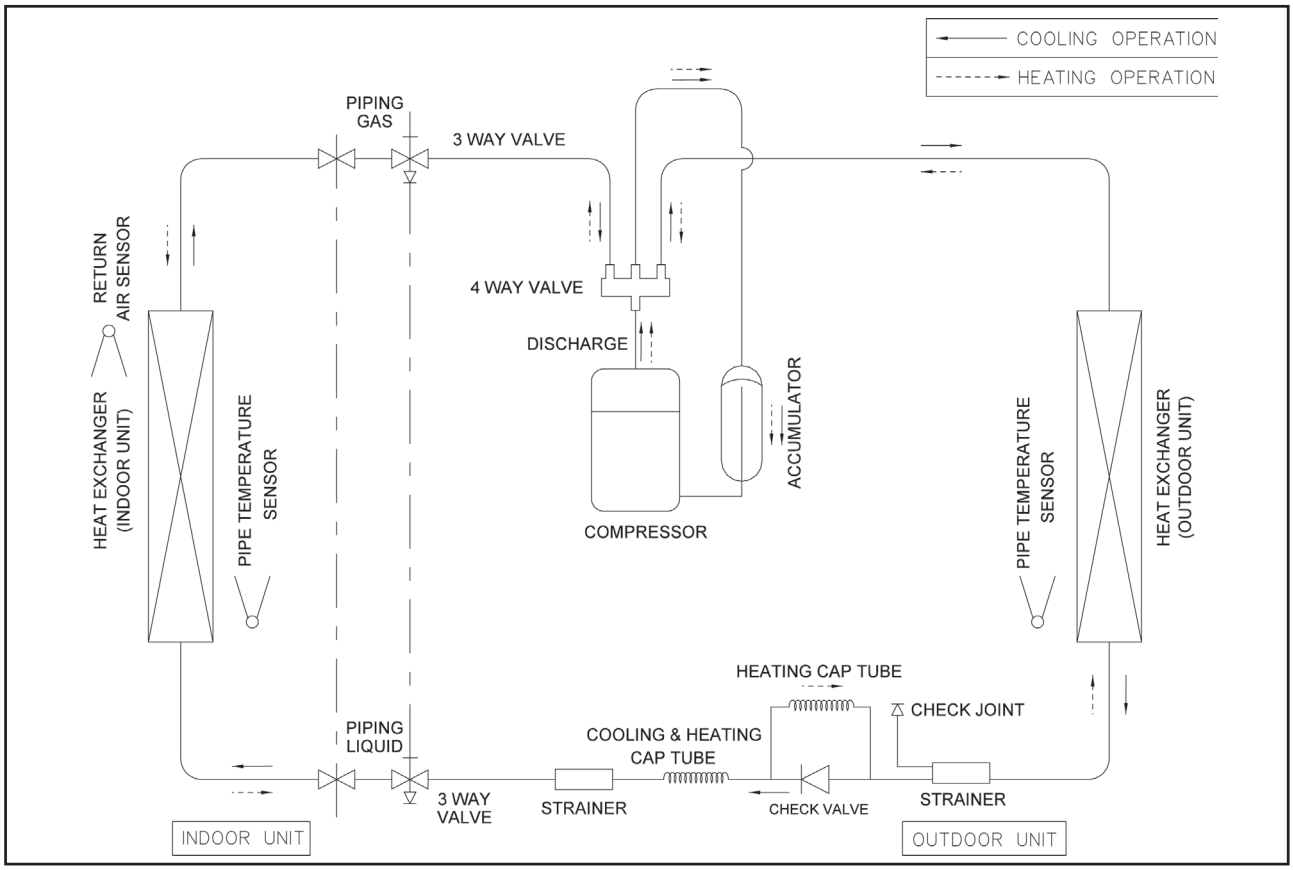
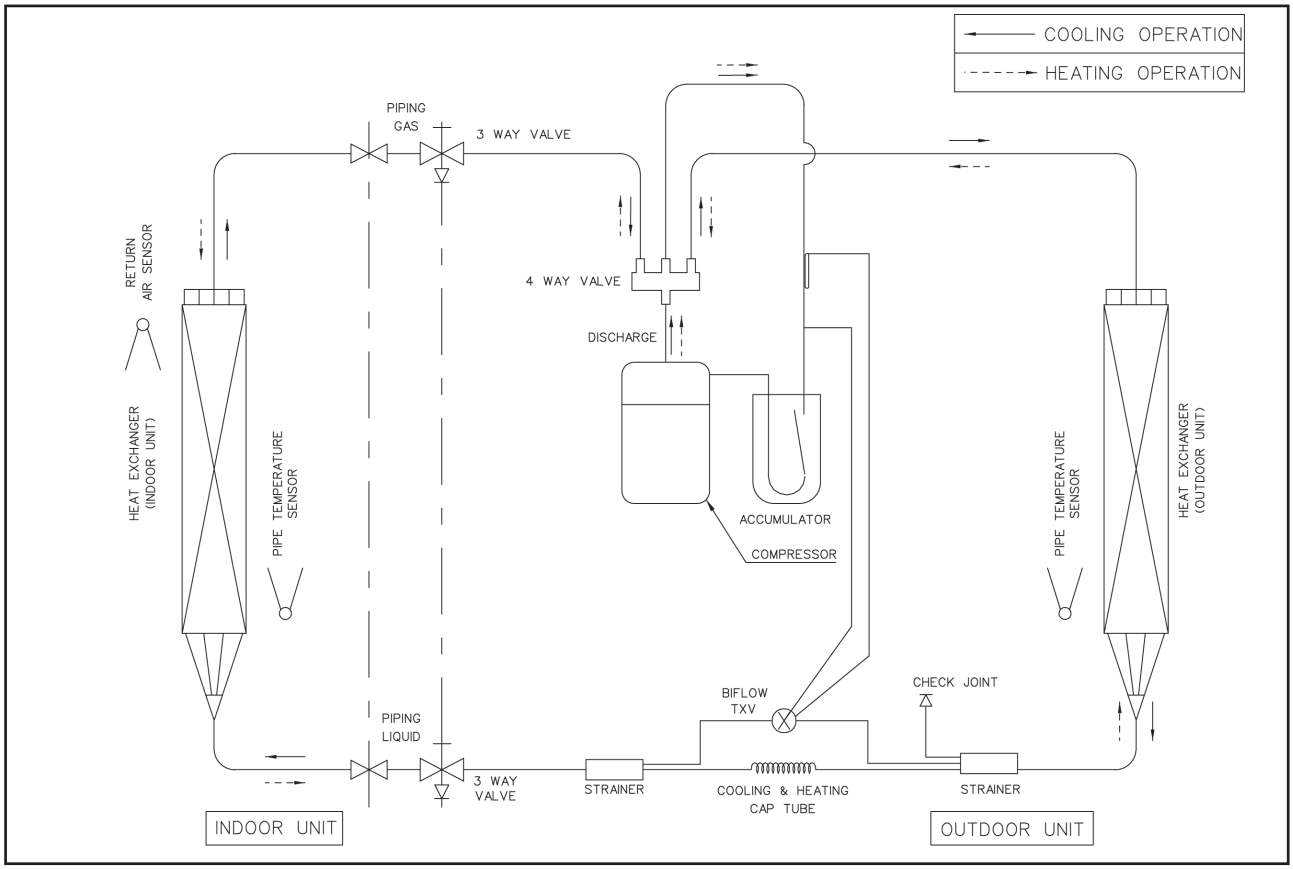
MODEL : A5CM 28ER - A5LC 28CR



MODEL : ACM 28ER - ALC 30CR



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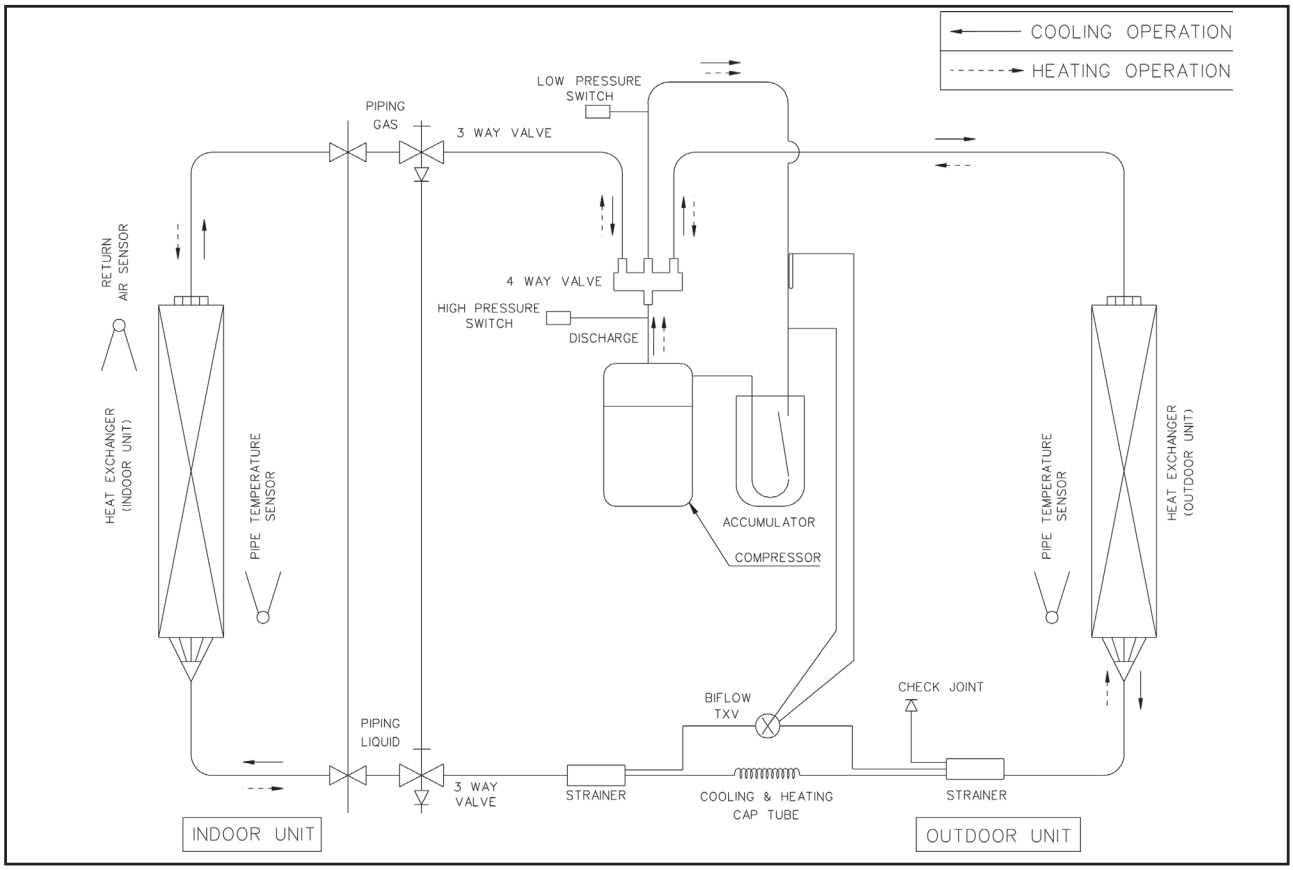
MODEL : A5CM 28ER - A5LC 35CR



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G12 Remote Controller

Temperature Setting

- To set the desired room temperature, press the button to increase or decrease the set temperature.
- The temperature setting range is from 16°C to 30°C
- Press both buttons simultaneously to toggle the temperature setting between °C and °F

On/Off Button

- Press Once to start the air conditioner
- Press again to stop the unit

ON Timer Setting

- Press the SET button will activate the on timer function.
- Set the desired on time by pressing the SET button continuously.
- Press the CLR button to cancel the off timer setting

Fan Speed Selection

- Press the button until the desired fan speed is achieved.

Turbo Mode

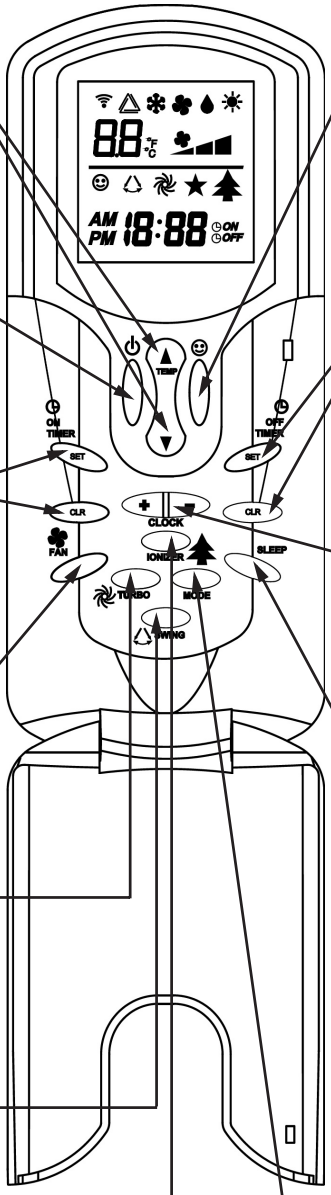
- Press the TURBO button to achieve the required set temperature in a short time.

Automatic Air Awing

- Press the SWING button to activate the automatic air swing function.
- To distribute the air to a specific direction, press the SWING button and wait until the louver move to the desired direction and press the button once again.

Ionizer

- Press the button to activate the negative Ion function, which will refresh the indoor air effectively.



Personalised Setting

- Press and hold the button for 3s to initiate personalized setting.
- Set the individual setting e.g. MODE, SET TEMP or FAN SPEED and leave for 4s to save
- 2 groups of settings are allowed to stored in the handset

OFF Timer Setting

- Press the SET button will activate the off timer function.
- Set the desired off time by pressing the SET button continuously.
- Press the CLR button to cancel the off timer setting

Clock Time Setting

- Press button + or - to increase or decrease the clock time.

Sleep Mode

- Press the button to activate sleep mode. This function is available under COOL, HEAT & AUTO mode.
- When it is activated in COOL mode, the set temperature will be increased 0.5°C after 30mins, 1°C after 1 hour and 2°C after 2 hours.
- When it is activated in HEAT mode, the set temperature will be decreased 1°C after 30mins, 2°C after 1 hour and 3°C after 2 hours.

Operating Mode

- Press the MODE button to select the type of operating mode.
- For Cooling only unit, the available modes are: COOL, DRY & FAN.
- For Heatpump unit, the available modes are: AUTO, COOL, DRY, FAN & HEAT.

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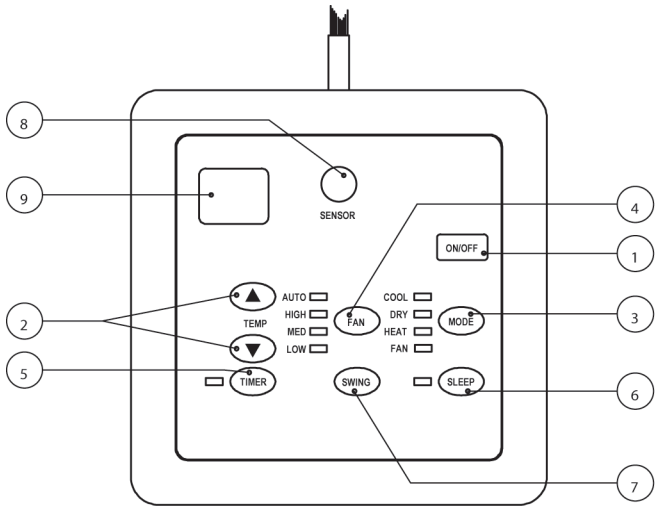
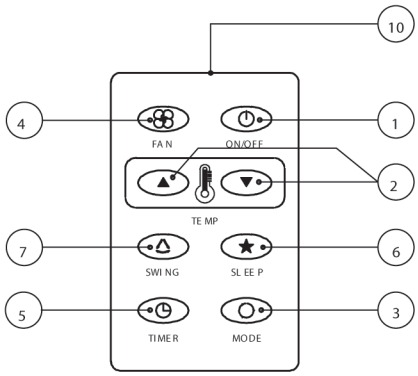


SLM



AC-5300 (OPTIONAL)

1. "ON/OFF" switch
- Press to start the air conditioner unit.
- Press again to stop the unit.

2. Temperature setting
- Set the desired room temperature.
- Press button to increase or decrease the set temperature. Setting range are between 16°C to 30°C (60°F to 80°F).

3. Operation Modes
- Press the "mode" button for select the type of operating mode.

  - Cooling Only :
    COOL, DRY, FAN
  - Heat Pump :
    AUTO, COOL, DRY, HEAT, FAN
    (AUTO mode is represented by bothCOOL and HEAT LED light on)

4. Fan Speed selection
- Press the button until the desired fan speed is achieved.

5. Timer
- Press the set button to select the switch timer of the air conditioner unit (the setting range is between 1 to 10 hours).

6. "Sleep" mode
- Press button to activate the sleep function can only be activated under "cool" or heating mode operation. When it is activated under "cool" mode operation, the set temperature will increase 0.5°C after 30 minutes, 1°C after 1 hour and 2°C after 2 hours. If it is actiaved under "HEAT" mode operation, the set temperature will be descreased 0.5°C after 30 minutes, 1°C after 1 hour and 2°C after 2 hours.

7. Air Swing
- Press button to activate the automatic air swing function.

8. Sensor
- Infra red sensor to receive signals from wireless controller.

9. LED Display
- To display the set temperature (in °C) and timer delay setting (in hours).

10. Transmission source
- To transmit signals to the air conditioner.

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Operating State and Fault Table

Wireless Remote Control – Handset
LED Indicator Light Display

Cooling Only

Heatpump

COOL	DRY	FAN	HEAT	Normal Operation / Fault Indication
○				Cool mode
			○	Heat mode
	○			Dry mode
		○		Fan mode
○			◑	Auto mode in cooling operation
◑			○	Auto mode in heating operation
		◑		Room air sensor open or short
	◑	◑		Indoor coil sensor open or short
	◑			Outdoor coil sensor open or short
◑				Compressor overload / indoor coil sensor short / outdoor coil sensor short
◑	◑			Gas leak

○ - ON ◑ - Blinking

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Wired Remote Control – SLM
Cooling / Heatpump Model

Error Code at 7 Segment Display	Operation / Faulty Indication
Blink E1	Room sensor open or short
Blink E2	Indoor coil sensor open
Blink E3	Outdoor coil sensor open
Blink E4	Compressor overload / Indoor coil sensor short / Outdoor coil sensor short
Blink E5	Gas leak
Blink E6	Water pump faulty

Phase Sequencer

	LED_P	LED_R	LED_S	LED_T
	(Red)	(Yellow)	(Yellow)	(Yellow)
Normal Operation	On	-	-	-
Reverse Phase	Blink	Blink	Blink	Blink
S & T Phase Missing	Blink	-	Blink	Blink
T Phase Missing	Blink	-	-	Blink
S Phase Missing	Blink	-	Blink	-
R Phase Missing	-	-	-	-
Overload	Blink	-	-	-
Sensor Missing	Blink	On	On	On

Notes: 1. "-" means LED off.
2. When R phase missing, no LED or buzzer will indicate the error, but relay 71 (Common) and 81 (NO) will cut off.
3. The unit will check the discharge sensor availability only during power up.
4. All errors can only recover through manually reset.

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Installation

Caution

Sharp edges and coil surfaces are potential injury hazard. Avoid from contact with them.

(1) Installation of Indoor Unit

Preliminary Site Survey

- Electrical supply and installation is to confirm to local authority's (e.g. National Electrical Board) codes and regulations.
- Voltage supply fluctuation must not exceed ± 10% of rated voltage. Electricity supply lines must be independent of welding transformers which can cause high supply fluctuation.
- Ensure that the location is convenient for wiring, piping and drainage.

Standard Mounting

Ensure that the overhead supports are strong enough to hold the weight of the unit. Position the hanger rods (wall mounting bracket for floor standing), and check for its alignment with the unit as shown in Figure A. Also, check that the hangers are secured and the base of the fan coil unit is leveled in both horizontal directions, taking into account the gradient for drainage flow as recommended in Figure B.

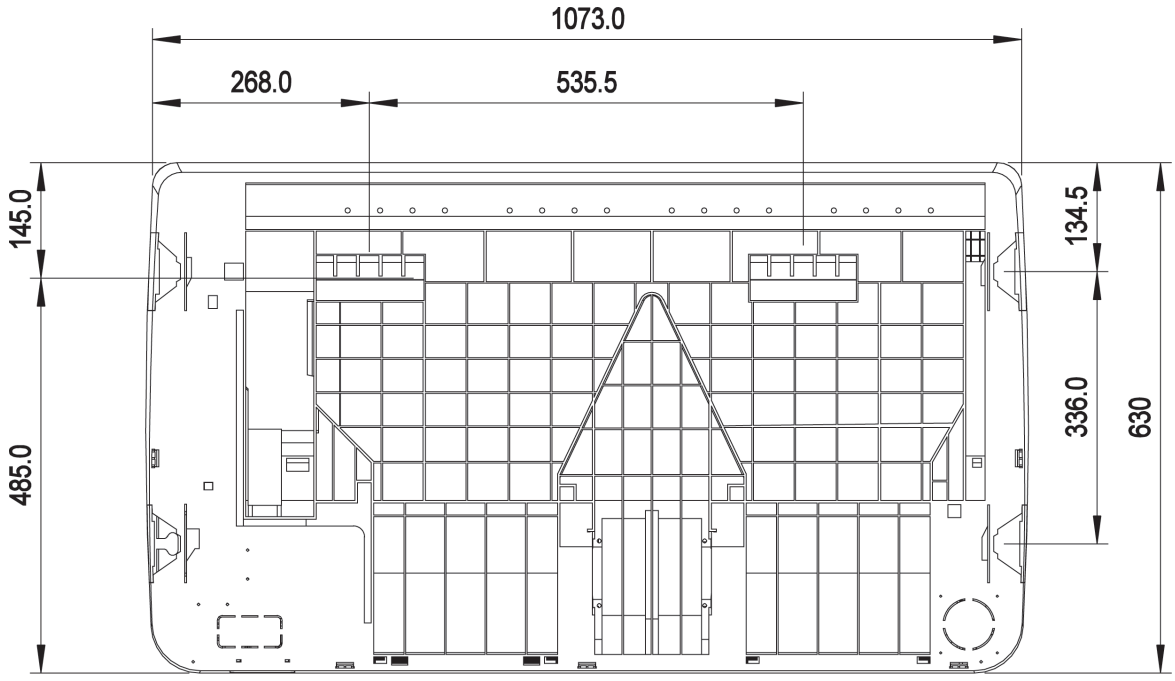

Figure A

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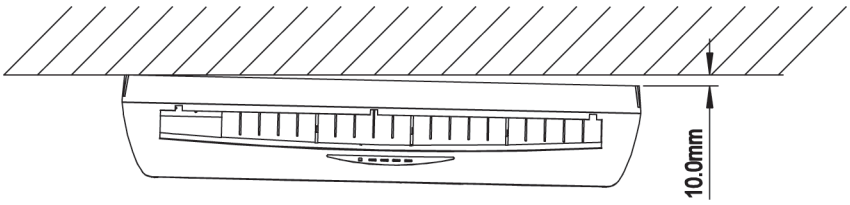
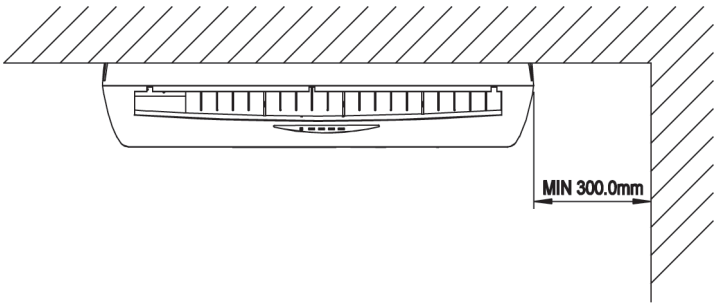
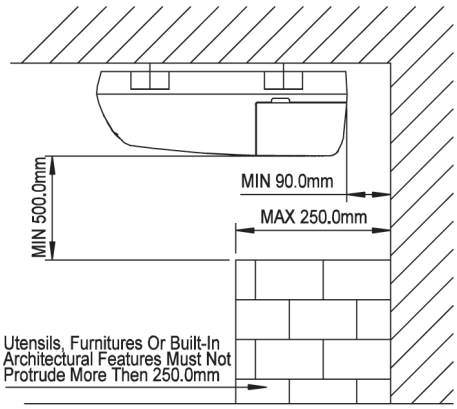
Please ensure that the following steps are taken:

- Check the gradient for drainage flow as recommended in Figure B.
- Provide clearance for easy servicing and optimal air flow as shown in Figure C.
- The indoor unit must be installed such that there is no short circuit of the cool discharge air with the warm return air.
- Don not install the indoor unit where there is direct sunlight shining on the unit. The location should be suitable for piping and drainage installation. The unit must be a large distance away from the door.

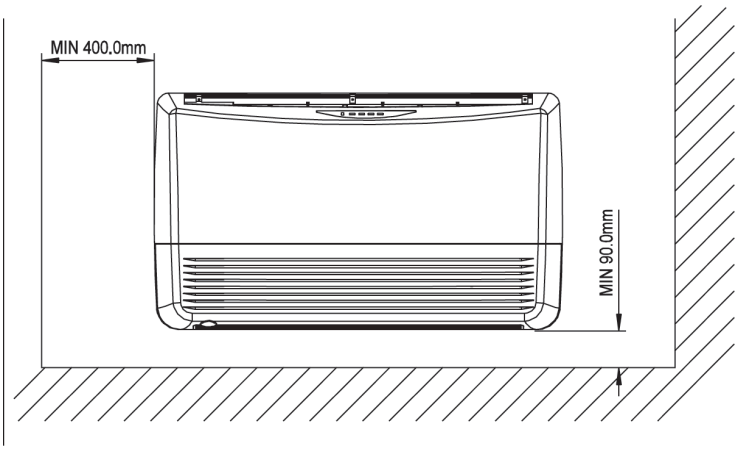


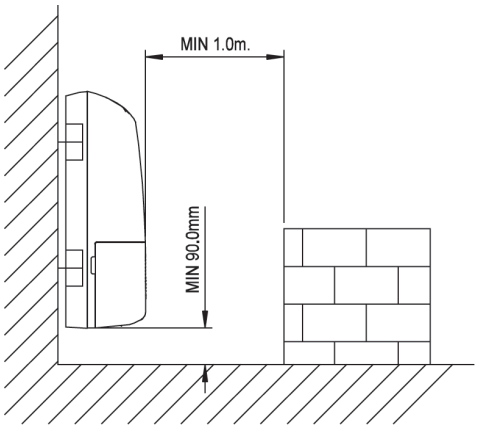
Figue B





Under ceiling type





Floor standing type

Figue C

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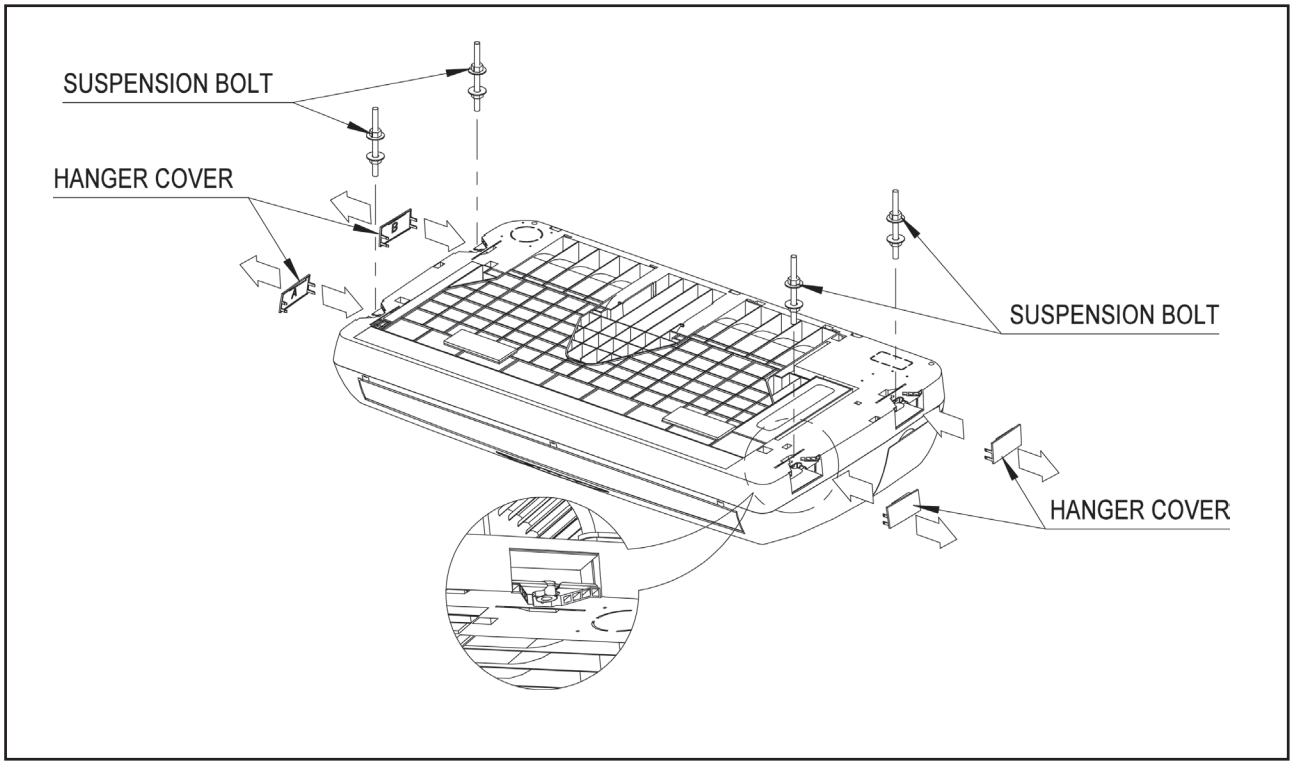
Under Ceiling Installation

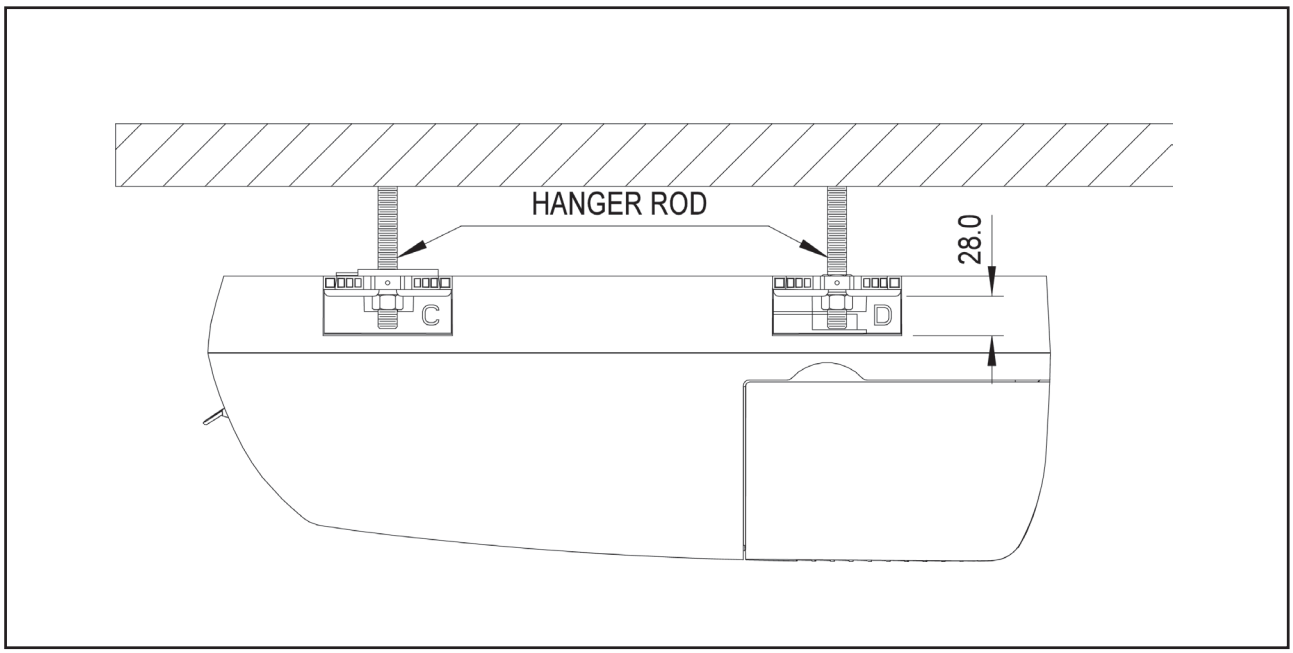
Install the Suspension Bolts

1. Install the suspension bolts so that it can support the indoor unit.
2. Adjust the distance to ceiling before installation.
3. Refer to the dimension given (Figure A) to install the unit.

Install the Indoor Unit

1. Insert the suspension bolts into the fittings of the hanger bracket.
2. Set the nuts and washer on the both side of the metal fittings.
3. Secure it with nuts.
4. Attach the hanger cover (4 pcs) to the units.





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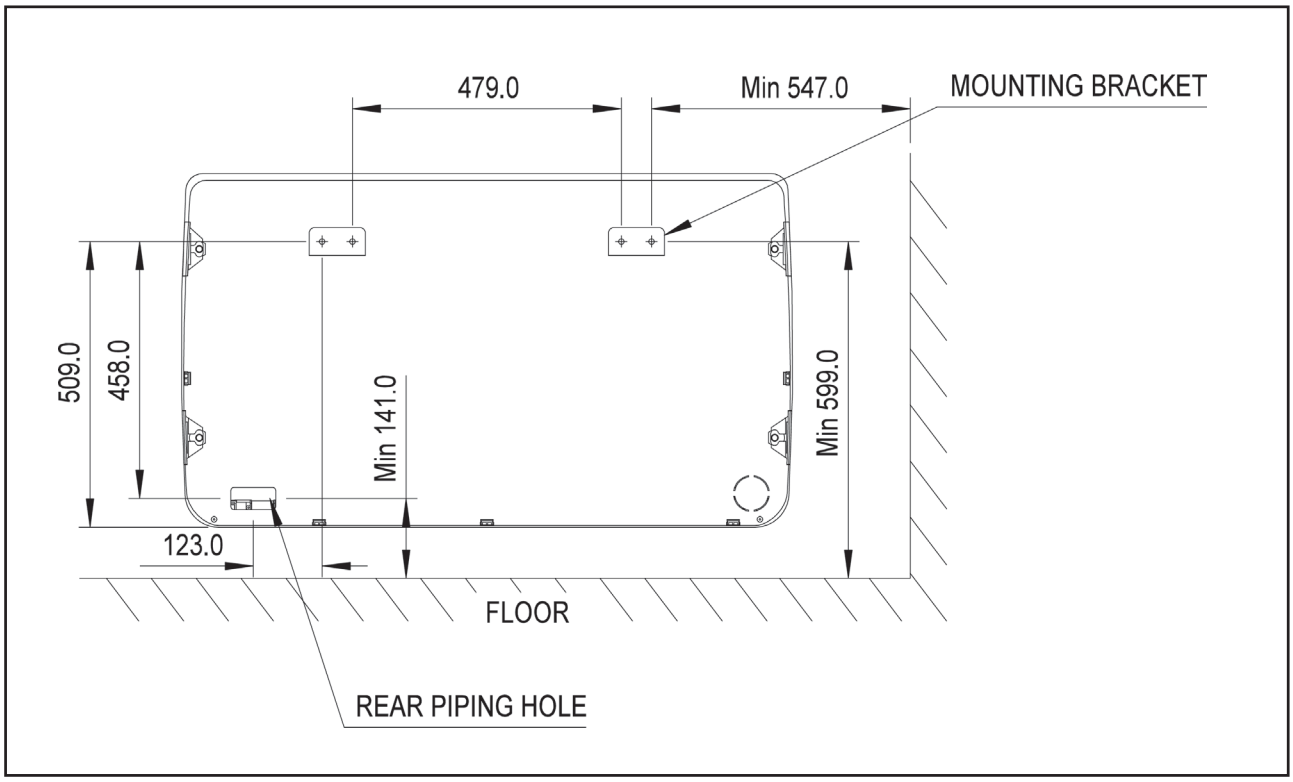
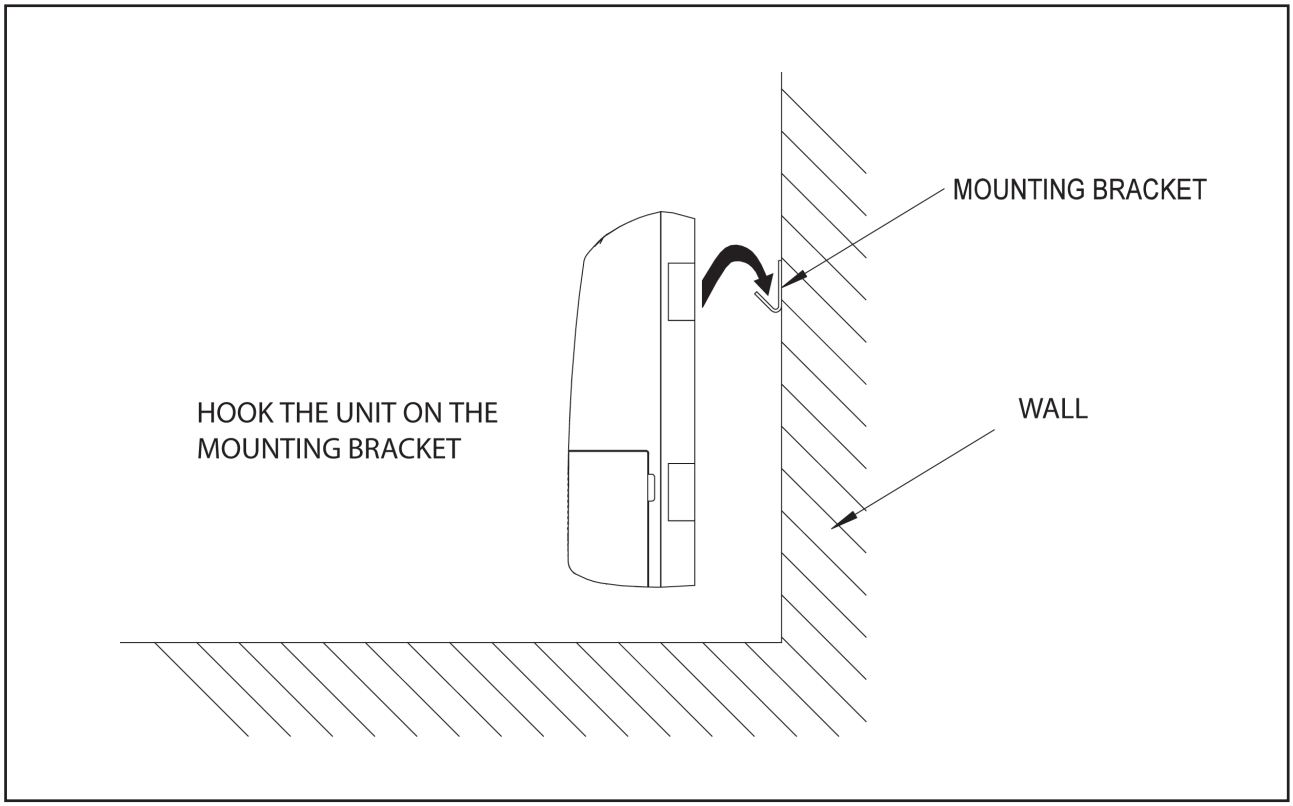
Floor standing installation



1. Refer to the dimension as illustrated when installing the mounting bracket.
2. Determine the pipe hose position using the rear piping hole. Drill the pipe hole at the slight downward slant to the outdoor side.



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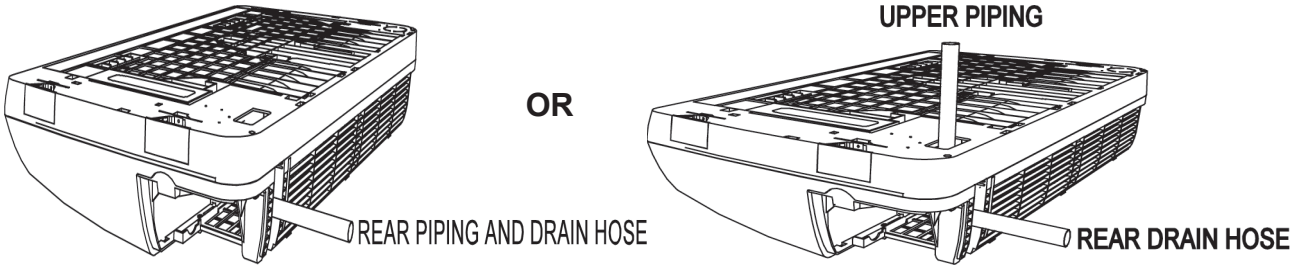
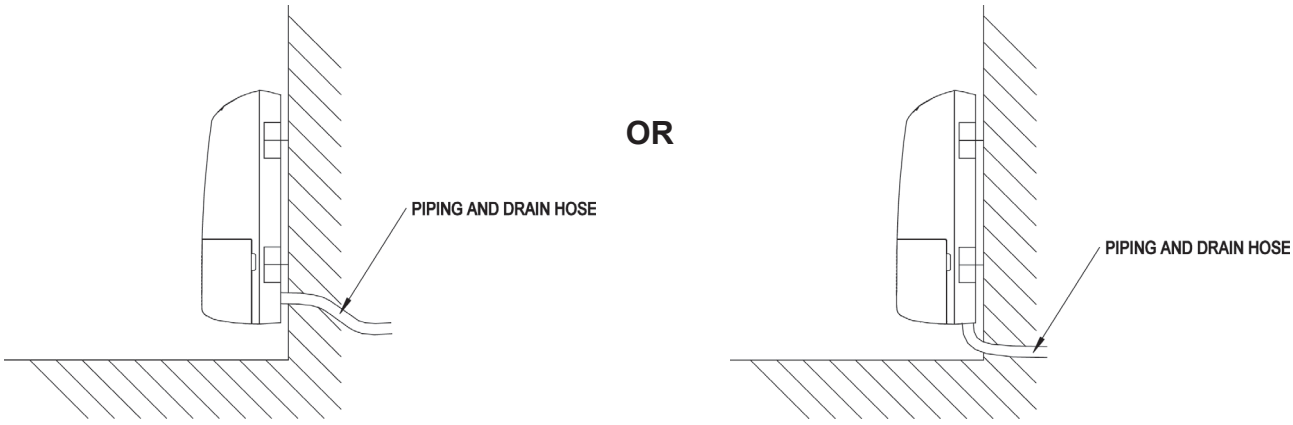
Piping and Drain Hose Installation

Under Ceiling Type

1. The piping direction can be 2 ways as illustrated.
2. The drain hose is only 1 way.

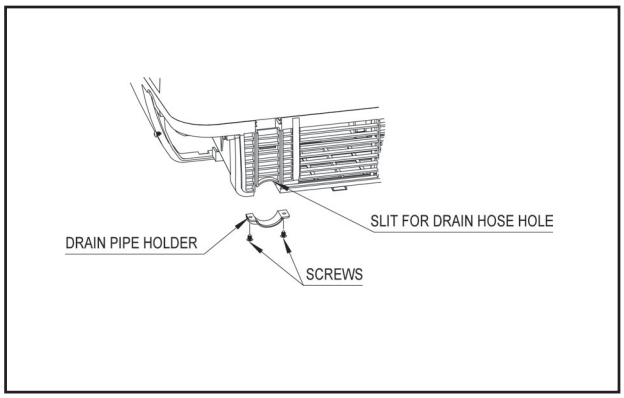


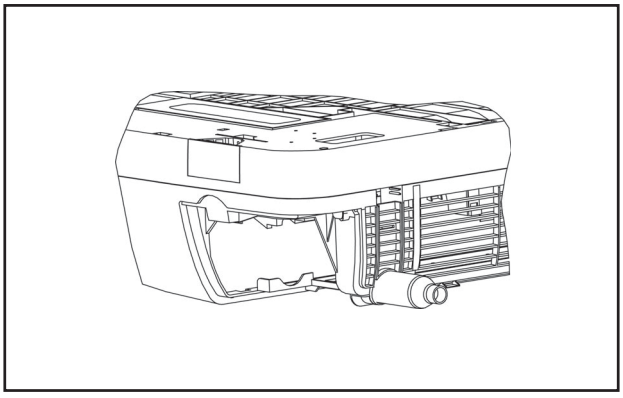
Floor standing type



How to Install the Drain Hose

1. Remove the 2 screws and the drain pipe holder.
2. Cut a slit for the drain hose hole.
3. Place the drain hose on the v-shape area and secure it with drain pipe holder and 2 screws.





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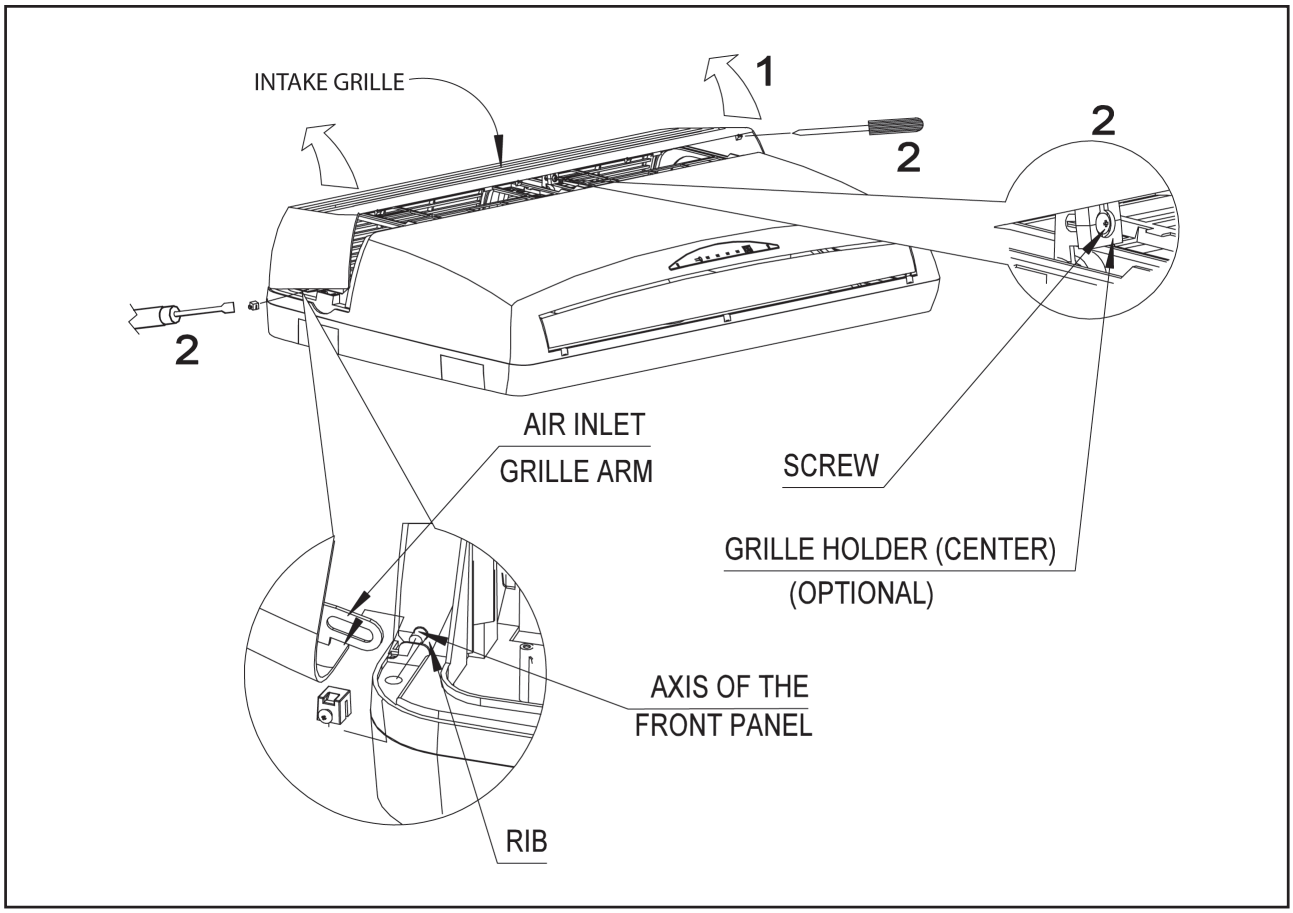
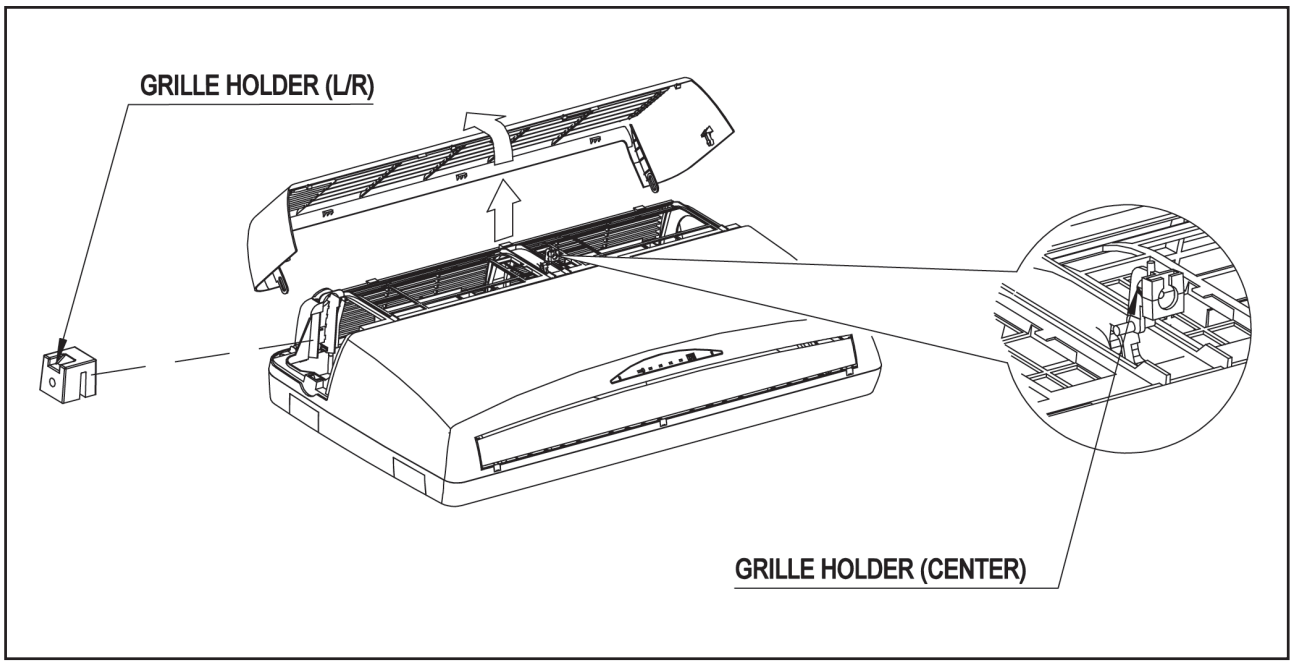
How to Remove the Air Inlet Grille

1. Remove the air inlet grille by both hands as the direction shown.
2. Loosen the screws for fixing the panel arm (3 screws - Left, Right and Center). Do not remove the screws at this time.
3. Move the air inlet grille upward, and then turn it backwards. (Do not use too much force).
4. Remove the grille holder (both left and right side). After that, remove the air intake grille.
5. Remove the grille holder (center) from the panel.





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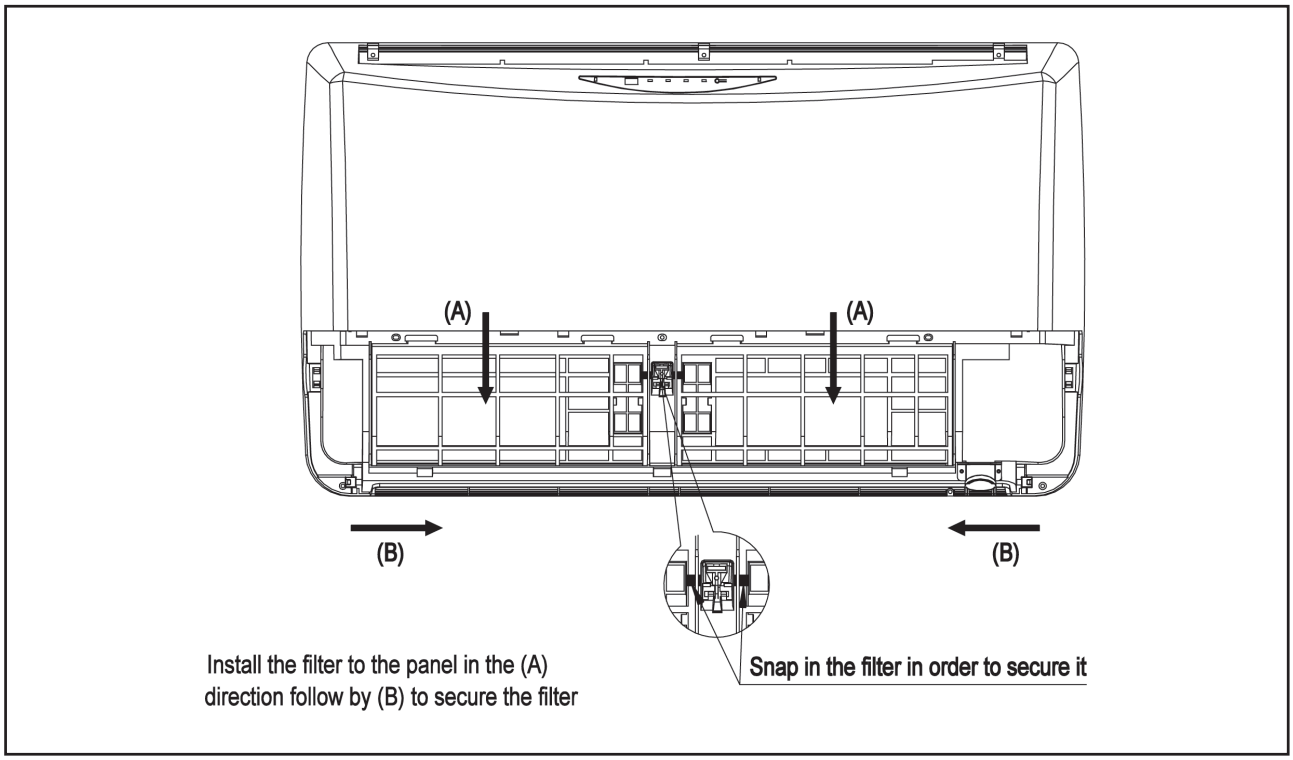
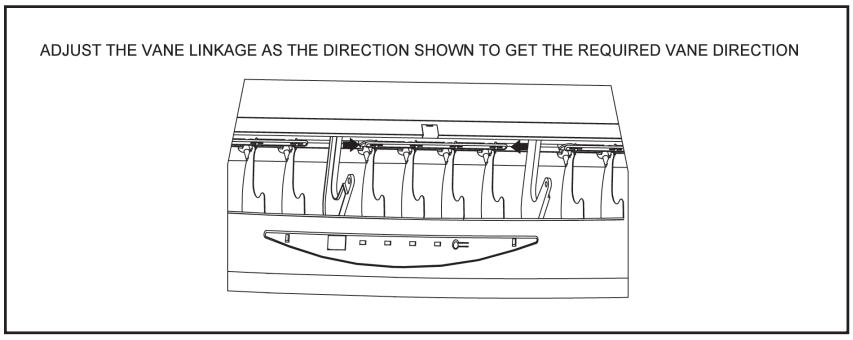
How to install the air filter

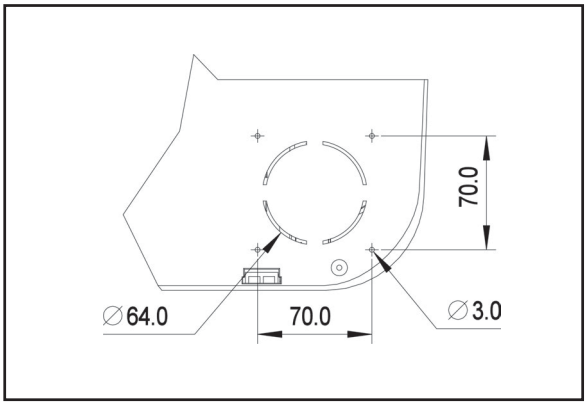

(A)
(A)
(B)
(B)
Install the filter to the panel in the (A) direction follow by (B) to secure the filter
Snap in the filter in order to secure it

To Adjust the Vane Direction

Adjust the vane linkage as the direction shown to get the required vane direction.



Dimension of the Fresh Air Intake Hole



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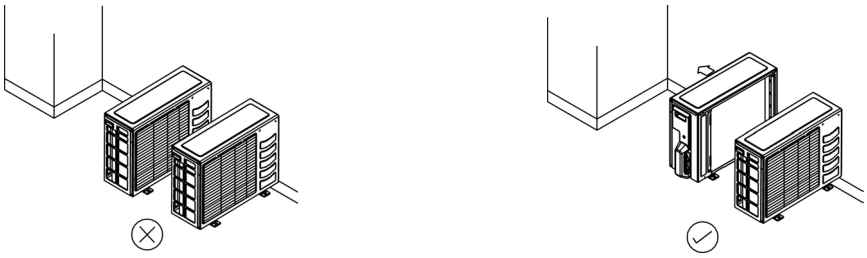
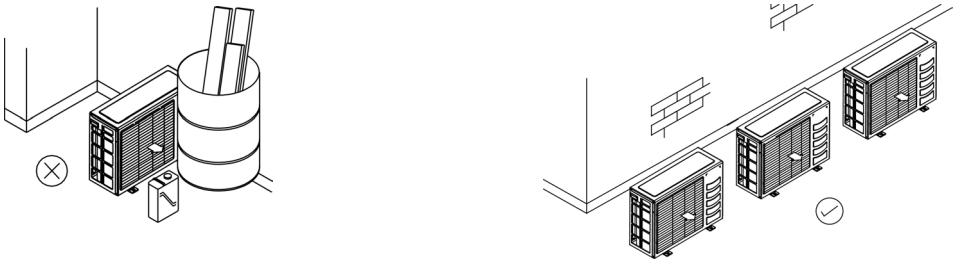
(2) Installation Of Outdoor Unit

As condensing temperature rises, evaporating temperature rises and cooling capacity drops. In order to achieve maximum cooling capacity, the location selected for outdoor unit should fulfill the following requirements :

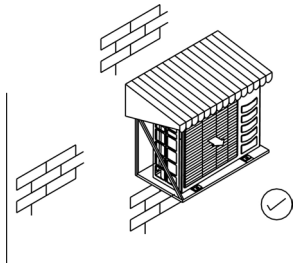
- Install the condensing (outdoor) unit in a way such that hot air distributed by the outdoor condensing unit cannot be drawn in again (as in the case of short circuit of hot discharge air). Allow sufficient space for maintenance around the unit.



- Ensure that there is no obstruction of air flow into or out of the unit. Remove obstacles which block air intake or discharge.



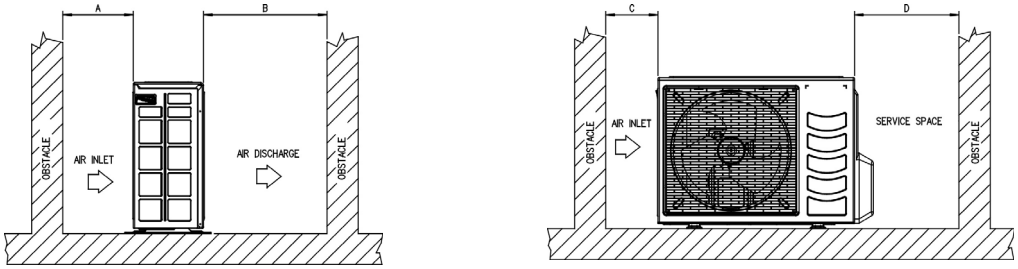
- The location must be well ventilated, so that the unit can draw in and distribute plenty of air thus lowering the condensing temperature.
- A place capable of bearing the weight of the outdoor unit and isolating noise and vibration.
- A place protected from direct sunlight. Otherwise use an awning for protection, if necessary.



- The location must not be susceptible to dust or oil mist.

Installation Clearance

- Outdoor units must be installed such that there is no short circuit of the hot discharge air or obstruction to smooth air flow. Select the coolest possible place where intake air should not be hotter than the outside temperature (max. 45°C)



ALL MODELS	A	B	C	D
Minimum Distance	300 mm	1000 mm	300 mm	500 mm

CAUTION : If the condensing unit is operated in an atmosphere containing oils(including machine oils), salt(coastal area), sulphide gas(near hot spring, oil refinery plant), such substances may lead to failure of the unit.

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(3) Refrigerant Piping

Maximum Piping Length And Maximum Number Of Bends

When the pipe length becomes too long, both the capacity and reliability drop. As the number of bends increases, system piping resistance to the refrigerant flow increases, thus lowering the cooling capacity, and as the result the compressor may become defective. Always choose the shortest path and follow the recommendation as tabulated below:

Model	Indoor	15E/ER	20E/ER	25E/ER	28E/ER	
	Outdoor	15C/CR	18 / 20C/CR	25C/CR	28C/CR	30 / 35C/CR
Maximum Length, m		12	15	15	15	45
Maximum Elevation, m		5	8	8	8	25
Maximum No. of Bends		10	10	10	10	10

Piping Sizes (Flare Connection Type)

Piping sizes are as follows:

R22

Model	ALC 15C/CR	ALC 18/20C/CR	ALC 25C/CR	ALC 28C/CR	ALC 30C/CR
Liquid (mm/in)	6.35 / $^{1}/_{4}$	6.35 / $^{1}/_{4}$	9.52 / $^{3}/_{8}$	9.52 / $^{3}/_{8}$	9.52 / $^{3}/_{8}$
Suction (mm/in)	12.70 / $^{1}/_{2}$	15.88 / $^{5}/_{8}$	15.88 / $^{5}/_{8}$	15.88 / $^{5}/_{8}$	15.88 / $^{5}/_{8}$

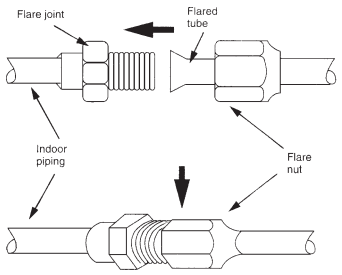
R410A

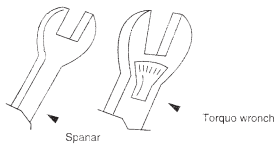
Model	A5LC 15C/CR	A5LC 20C/CR	A5LC 25C/CR	A5LC 28C/CR	A5LC 35C/CR
Liquid (mm/in)	6.35 / $^{1}/_{4}$	6.35 / $^{1}/_{4}$	6.35 / $^{1}/_{4}$	9.52 / $^{3}/_{8}$	9.52 / $^{3}/_{8}$
Suction (mm/in)	12.70 / $^{1}/_{2}$	12.70 / $^{1}/_{2}$	15.88 / $^{5}/_{8}$	15.88 / $^{5}/_{8}$	15.88 / $^{5}/_{8}$

Piping Connection to the Units

- Align the center of the piping and tighten the flare nut sufficiently with fingers.
- Finally tighten the flare nut with torque wrench unit the wrench clicks.
- When tightening the flare nut with torque wrench, ensure the direction for tightening follows the arrow on the wrench.

Pipe Size (mm/in)	Torque (Nm)
6.35 (1/4)	18
9.52 (3/8)	42
12.70 (1/2)	55
15.88 (5/8)	65
19.05 (3/4)	78





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(4) Wiring

Electrical Connections

- Wiring regulations on wire diameters differ from country to country. Please refer to your LOCAL ELECTRICAL CODES for field wiring rules. Be sure that installations comply with the rules and regulations.

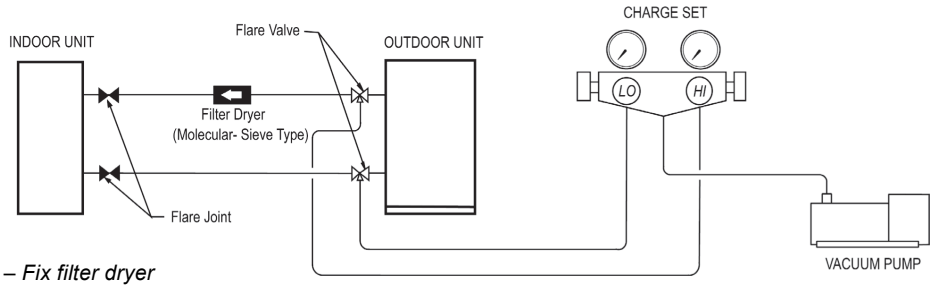
General Precautions

- Ensure that the rated voltage of the unit corresponds to the name plate before carrying out proper wiring according to the wiring diagram.
- Provide a power outlet to be used exclusively for each unit. A power supply disconnects and a circuit breaker for over-current protection should be provided in the exclusive line.
- The unit must be **GROUNDED** to prevent possible hazards due to insulation failures.
- All wiring must be firmly connected.
- All wiring must not touch the hot refrigerant piping, compressor or any moving parts of fan motors.

(5) Vacuuming And Charging

The pre-charged outdoor unit does not need any vacuuming or charging. However once it is connected, the connecting pipe line and the indoor unit need to be vacuumed before releasing the R22/R407C/R410A from the outdoor unit.

1. Open the service port core cap.
2. Connect pressure gauge to the service port.
3. Connect the line to vacuum pump. Open the charging manifold valve and turn the pump on. Vacuum to -0.1 MPa (-760mmHg) or lower. (Evacuation time varies by the pump but averagely in 1 hour).



Note : R407C – Fix filter dryer
R22 - Nil
R410A - Nil

(6) Additional Charge

- The refrigerant charge has already charged into the outdoor unit. For the piping length of 7.6m, additional refrigerant charge after vacuuming is not necessary.
- When the piping length is more than 7.6m, please use the table below (unit in gram).

Model	10m	12m	15m	25m	35m	45m
ALC 15C/CR	37 / 57	68 / 104	-	-	-	-
ALC 18C/CR	38 / 54	70 / 98	118 / 166	-	-	-
ALC 20C/CR	38 / 53	70 / 96	118 / 162	-	-	-
ALC 25C/CR	94 / 53	172 / 98	289 / 164	-	-	-
ALC 28C/CR	94 / 133	172 / 244	291 / 411	-	-	-
ALC 30C/CR	133 / 133	244 / 243	410 / 409	964 / 961	1518 / 1514	2072 / 2067

Model	10m	15m	20m	25m	35m	45m
A5LC 15C/CR	20 / 39	37 / 71	-	-	-	-
A5LC 20C/CR	24 / 40	44 / 73	74 / 123	-	-	-
A5LC 25C/CR	24 / 23	45 / 43	75 / 72	-	-	-
A5LC 28C/CR	58 / 91	106 / 167	178 / 281	-	-	-
A5LC 35C/CR	65 / 98	118 / 180	199 / 303	469 / 712	738 / 1122	1007 / 1531

The additional refrigerant charge amount recommended is a guideline for longer piping application. The actual charge required may be different from the guideline due to different application and variation in site conditions.

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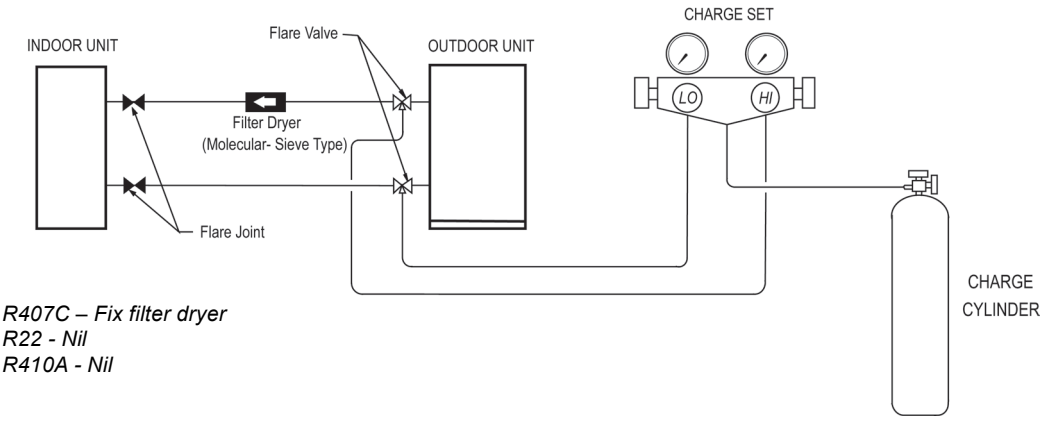
Diagram shows typical charging method:



Note : R407C – Fix filter dryer
R22 - Nil
R410A - Nil

(7) Overall Checking

- Ensure the following, in particular:
  1. The unit is mounted solidly and rigid in position.
  2. Piping and connections are leak proof after charging.
  3. Proper wiring has been done.
- Drainage check – pour some water into drain pan.
- Test run
  1. Conduct a test run after water drainage test and gas leakage test.
  2. Watch out for the following:
     (a) Is the electric plug firmly inserted into the socket?
     (b) Is there any abnormal sound from the unit?
     (c) Is there any abnormal vibration with regard to the unit itself or piping?
     (d) Is there smooth drainage of water?
- Check that:
  1. Outdoor fan is running, with warm air blowing off the outdoor unit (cooling cycle).
  2. Indoor blower is running and discharge cool air (cooling cycle).
  3. Suction (low side) pressure is as per recommendations.
  4. The remote controller has incorporated a 3 minutes delay in the circuit. Thus, it requires about 3 minutes before the outdoor unit can start up.

(8) Standard Operating Condition

Cooling Only Unit

Temperature	T_s ˚C / ˚F	T_h ˚C / ˚F
Minimum Indoor Temperature	19.4 / 66.9	13.9 / 57.0
Maximum Indoor Temperature	26.7 / 80.1	19.4 / 66.9
Minimum Outdoor Temperature	19.4 / 66.9	13.9 / 57.0
Maximum Outdoor Temperature	46 / 114.8	24 / 75.2

Heat Pump Unit

Temperature	T_s ˚C / ˚F	T_h ˚C / ˚F
Minimum Indoor Temperature	10 / 50	-
Maximum Indoor Temperature	26.7 / 80.1	-
Minimum Outdoor Temperature	-8 / 17.6	-9 / 15.8
Maximum Outdoor Temperature	24 / 75.2	18 / 64.4

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(9) Special Precautions When Dealing With Refrigerant R410a Unit

i) What Is New Refrigerant R410A?

R410A is a new HFC refrigerant which does not damage the ozone layer. The working pressure of this new refrigerant is 1.6 times higher than conventional refrigerant (R22), thus proper installation / servicing is essential.

ii) Components

Mixture weight composition R32(50%) and R125(50%)

iii) Characteristic

- R410A liquid and vapor components have different compositions when the fluid evaporates or condenses. Hence, when leak occurs and only vapor leaks out, the composition of the refrigerant mixture left in the system will change and subsequently affect the system performance. **DO NOT** add new refrigerant to leaked system. It is recommended that the system should be evacuated thoroughly before recharging with R410A.
- When refrigerant R410A is used, the composition will differ depending on whether it is in gaseous or liquid phase. Hence when charging R410A, ensure that only liquid is being withdrawn from the cylinder or can. This is to make certain that only original composition of R410A is being charged into the system.
- POE oil is used as lubricant for R410A compressor, which is different from the mineral oil used for R22 compressor. Extra precaution must be taken not to expose the R410A system too long to moist air.

iv) Check List Before Installation/Servicing

- Tubing
  Refrigerant R410A is more easily affected by dust of moisture compared with R22, make sure to temporarily cover the ends of the tubing prior to installation
- Compressor oil
  No additional charge of compressor oil is permitted.
- Refrigerant
  No other refrigerant other that R410A
- Tools (size of service port is different from R22 system)
  Tools specifically for R410A only (must not be used for R22 or other refrigerant)
  i) Manifold gauge and charging hose
  ii) Gas leak detector
  iii) Refrigerant cylinder/charging cylinder
  iv) Vacuum pump c/w adapter
  v) Flare tools
  vi) Refrigerant recovery machine

v) Handling And Installation Guidelines

Like R22 system, the handling and installation of R410A system are closely similar. All precautionary measures; such as ensuring no moisture, no dirt or chips in the system, clean brazing using nitrogen, and thorough leak check and vacuuming are equally important requirements. However, due to its hydroscopic POE oil, additional precautions must be taken to ensure optimum and trouble free system operation.

a) During installation or servicing, avoid prolong exposure of the internal part of the refrigerant system to moist air. Residual POE oil in the piping and components can absorb moisture from the air.

b) Ensure that the compressor is not expose to open air for more than the recommended time specified by its manufacturer (typically less than 10 minutes). Removed the seal plugs only when the compressor is about to be brazed.

c) The system should be thoroughly vacuumed to 1.0 Pa (700mmHg) or lower. This vacuuming level is more stringent than R22 system so as to ensure no incompressible gas and moisture in the system.

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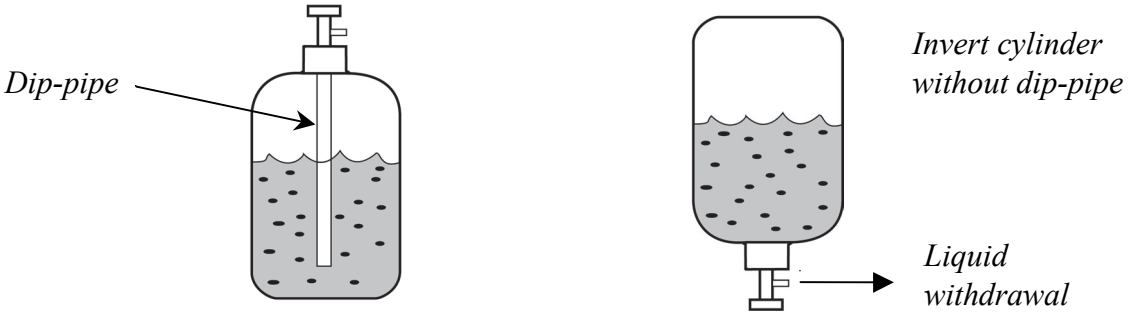
d) When charging R410A, ensure that only liquid is being withdrawn from the cylinder or can. This is to ensure that only the original composition of R410A is being delivered into the system. The liquid composition can be different from the vapor composition.



f) Normally, the R410A cylinder or can is being equipped with a dip pipe for liquid withdrawal. However, if the dip pipe is not available, invert the cylinder or can so as to withdraw liquid from the valve at the bottom.

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5. ENGINEERING AND PHYSICAL DATA

GENERAL DATA - COOLING ONLY (R22)

MODEL		INDOOR UNIT			ACM 15E
		OUTDOOR UNIT			ALC 15C
NOMINAL CAPACITY				Btu/h	12000
				W	3520
NOMINAL TOTAL INPUT POWER				W	1250
NOMINAL RUNNING CURRENT				A	5.6
POWER SOURCE				V/Ph/Hz	220 - 240 / 1 / 50
EER				W/W	2.82
REFRIGERANT TYPE					R22
REFRIGERANT CONTROL (EXPANSION DEVICE)					OUTDOOR CAP. TUBE
INDOOR UNIT	CONTROL	AIR DISCHARGE			AUTOMATIC LOUVER (UP & DOWN)
		OPERATION			WIRELESS OR WIRED MICROCOMPUTER REMOTE CONTROL
	AIR FLOW	HIGH		l/s / CFM	240 / 508
		MEDIUM		l/s / CFM	182 / 386
		LOW		l/s / CFM	165 / 350
	EXTERNAL STATIC PRESSURE (H/M/L)			Pa / in.wg.	0
	SOUND PRESSURE LEVEL (H/M/L)			dBA	48 / 43 / 41
	UNIT DIMENSION	HEIGHT		mm/in	218 / 8.6
		WIDTH		mm/in	1080 / 42.5
		DEPTH		mm/in	630 / 24.8
	PACKING DIMENSION	HEIGHT		mm/in	297 / 11.7
		WIDTH		mm/in	1197 / 47.1
		DEPTH		mm/in	740 / 29.1
	UNIT WEIGHT			kg/lb	26
	CONDENSATE DRAIN SIZE			mm/in	19.1 / 3/4
OUTDOOR UNIT	AIR FLOW			l/s / CFM	453 / 960
	SOUND PRESSURE LEVEL			dBA	49
	UNIT DIMENSION	HEIGHT		mm/in	540 / 21.3
		WIDTH		mm/in	700 / 27.6
		DEPTH		mm/in	250 / 9.8
	PACKING DIMENSION	HEIGHT		mm/in	620 / 24.4
		WIDTH		mm/in	810 / 31.9
		DEPTH		mm/in	330 / 13.0
	UNIT WEIGHT			kg/lb	32 / 71
	PIPE CONNECTION	TYPE			FLARE VALVE
		SIZE	LIQUID	mm/in	6.4 / 1/4
			GAS	mm/in	12.7 / 1/2
REFRIGERANT CHARGE				kg/lb	0.60 / 1.32

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3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
COOLING - 27°C DB / 19°C WB INDOOR AND 35°C DB / 24°C WB OUTDOOR
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS B 8615 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE UNIT.

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GENERAL DATA - COOLING ONLY (R22)

MODEL		INDOOR UNIT		ACM 20E	
		OUTDOOR UNIT		ALC 18C	ALC 20C
NOMINAL CAPACITY			Btu/h	18000	19000
			W	5280	5570
NOMINAL TOTAL INPUT POWER			W	1870	1861
NOMINAL RUNNING CURRENT			A	8.4	8.0
POWER SOURCE			V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
EER			W/W	2.82	2.99
REFRIGERANT TYPE				R22	
REFRIGERANT CONTROL (EXPANSION DEVICE)				OUTDOOR CAP. TUBE	
INDOOR UNIT	CONTROL	AIR DISCHARGE		AUTOMATIC LOUVER (UP & DOWN)	
		OPERATION		WIRELESS OR WIRED MICROCOMPUTER REMOTE CONTROL	
	AIR FLOW	HIGH	l/s / CFM	245 / 520	
		MEDIUM	l/s / CFM	217 / 460	
		LOW	l/s / CFM	192 / 406	
	EXTERNAL STATIC PRESSURE (H/M/L)		Pa / in.wg.	0	
	SOUND PRESSURE LEVEL (H/M/L)		dBA	48 / 46 / 43	
	UNIT DIMENSION	HEIGHT	mm/in	218 / 8.6	
		WIDTH	mm/in	1080 / 42.5	
		DEPTH	mm/in	630 / 24.8	
	PACKING DIMENSION	HEIGHT	mm/in	297 / 11.7	
		WIDTH	mm/in	1197 / 47.1	
		DEPTH	mm/in	740 / 29.1	
	UNIT WEIGHT		kg/lb	27 / 60	
	CONDENSATE DRAIN SIZE		mm/in	19.1 / 3/4	
OUTDOOR UNIT	AIR FLOW		l/s / CFM	614 / 1300	
	SOUND PRESSURE LEVEL		dBA	51	
	UNIT DIMENSION	HEIGHT	mm/in	648 / 25.5	
		WIDTH	mm/in	855 / 33.7	
		DEPTH	mm/in	328 / 12.9	
	PACKING DIMENSION	HEIGHT	mm/in	710 / 28.0	
		WIDTH	mm/in	990 / 39.0	
		DEPTH	mm/in	415 / 16.3	
	UNIT WEIGHT		kg/lb	58 / 128	59 / 130
	PIPE CONNECTION	TYPE		FLARE VALVE	
		SIZE LIQUID	mm/in	6.4 / 1/4	
		SIZE GAS	mm/in	15.9 / 5/8	
REFRIGERANT CHARGE			kg/lb	0.85 / 1.87	1.35 / 2.98

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COOLING - 27°C DB / 19°C WB INDOOR AND 35°C DB / 24°C WB OUTDOOR
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS B 8615 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE UNIT.

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GENERAL DATA - COOLING ONLY (R22)

MODEL			**INDOOR UNIT**		**ACM 25E**
			OUTDOOR UNIT		**ALC 25C**
NOMINAL CAPACITY				**Btu/h**	24000
				W	7030
NOMINAL TOTAL INPUT POWER				**W**	2573
NOMINAL RUNNING CURRENT				**A**	11.5
POWER SOURCE				**V/Ph/Hz**	220 - 240 / 1 / 50
EER				**W/W**	2.73
REFRIGERANT TYPE					R22
REFRIGERANT CONTROL (EXPANSION DEVICE)					OUTDOOR CAP. TUBE
INDOOR UNIT	**CONTROL**		**AIR DISCHARGE**		AUTOMATIC LOUVER (UP & DOWN)
			OPERATION		WIRELESS OR WIRED MICROCOMPUTER REMOTE CONTROL
	AIR FLOW		**HIGH**	**l/s / CFM**	274 / 580
			MEDIUM	**l/s / CFM**	250 / 530
			LOW	**l/s / CFM**	231 / 490
	EXTERNAL STATIC PRESSURE (H/M/L)			**Pa / in.wg.**	0
	SOUND PRESSURE LEVEL (H/M/L)			**dBA**	50 / 47 / 46
	UNIT DIMENSION		**HEIGHT**	**mm/in**	218 / 8.6
			WIDTH	**mm/in**	1080 / 42.5
			DEPTH	**mm/in**	630 / 24.8
	PACKING DIMENSION		**HEIGHT**	**mm/in**	297 / 11.7
			WIDTH	**mm/in**	1197 / 47.1
			DEPTH	**mm/in**	740 / 29.1
	UNIT WEIGHT			**kg/lb**	27 / 60
	CONDENSATE DRAIN SIZE			**mm/in**	19.1 / 3/4
OUTDOOR UNIT	**AIR FLOW**			**l/s / CFM**	755 / 1600
	SOUND PRESSURE LEVEL			**dBA**	52
	UNIT DIMENSION		**HEIGHT**	**mm/in**	750 / 29.5
			WIDTH	**mm/in**	855 / 33.7
			DEPTH	**mm/in**	328 / 12.9
	PACKING DIMENSION		**HEIGHT**	**mm/in**	810 / 31.9
			WIDTH	**mm/in**	990 / 39.0
			DEPTH	**mm/in**	415 / 16.3
	UNIT WEIGHT			**kg/lb**	62 / 137
	PIPE CONNECTION		**TYPE**		FLARE VALVE
		SIZE	**LIQUID**	**mm/in**	9.5 / 3/8
			GAS	**mm/in**	15.9 / 5/8
REFRIGERANT CHARGE				**kg/lb**	1.50 / 3.31

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GENERAL DATA - COOLING ONLY (R22)

MODEL		INDOOR UNIT			ACM 28E	
		OUTDOOR UNIT			ALC 28C	ALC 30C
NOMINAL CAPACITY				Btu/h	28000	28000
				W	8210	8210
NOMINAL TOTAL INPUT POWER				W	2811	2747
NOMINAL RUNNING CURRENT				A	13.6	13.3
POWER SOURCE				V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
EER				W/W	2.92	2.99
REFRIGERANT TYPE					R22	
REFRIGERANT CONTROL (EXPANSION DEVICE)					INDOOR CAP. TUBE	
INDOOR UNIT	CONTROL	AIR DISCHARGE			AUTOMATIC LOUVER (UP & DOWN)	
		OPERATION			WIRELESS OR WIRED MICROCOMPUTER REMOTE CONTROL	
	AIR FLOW	HIGH		l/s / CFM	302 / 640	
		MEDIUM		l/s / CFM	264 / 560	
		LOW		l/s / CFM	217 / 460	
	EXTERNAL STATIC PRESSURE (H/M/L)			Pa / in.wg.	0	
	SOUND PRESSURE LEVEL (H/M/L)			dBA	56 / 51 / 44	
	UNIT DIMENSION	HEIGHT		mm/in	218 / 8.6	
		WIDTH		mm/in	1080 / 42.5	
		DEPTH		mm/in	630 / 24.8	
	PACKING DIMENSION	HEIGHT		mm/in	297 / 11.7	
		WIDTH		mm/in	1197 / 47.1	
		DEPTH		mm/in	740 / 29.1	
	UNIT WEIGHT			kg/lb	28 / 62	
	CONDENSATE DRAIN SIZE			mm/in	19.1 / 3/4	
OUTDOOR UNIT	AIR FLOW			l/s / CFM	741 / 1570	1605 / 3400
	SOUND PRESSURE LEVEL			dBA	54	58
	UNIT DIMENSION	HEIGHT		mm/in	750 / 29.5	850 / 33.46
		WIDTH		mm/in	855 / 33.7	1030 / 40.55
		DEPTH		mm/in	328 / 12.9	400 / 15.75
	PACKING DIMENSION	HEIGHT		mm/in	810 / 31.9	1000 / 39.37
		WIDTH		mm/in	990 / 39.0	1200 / 47.24
		DEPTH		mm/in	415 / 16.3	560 / 22.05
	UNIT WEIGHT			kg/lb	68 / 150	95 / 209
	PIPE CONNECTION	TYPE			FLARE VALVE	
		SIZE	LIQUID	mm/in	9.5 / 3/8	9.5 / 3/8
			GAS	mm/in	15.9 / 5/8	15.9 / 5/8
REFRIGERANT CHARGE				kg/lb	2.40 / 5.3	1.40 / 3.09

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COOLING - 27°C DB / 19°C WB INDOOR AND 35°C DB / 24°C WB OUTDOOR
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GENERAL DATA - HEATPUMP (R22)

MODEL					INDOOR UNIT	ACM 15ER
					OUTDOOR UNIT	ALC 15CR
NOMINAL COOLING CAPACITY					Btu/h	12000
					W	3520
NOMINAL HEATING CAPACITY					Btu/h	12000
					W	3520
NOMINAL TOTAL INPUT POWER (COOLING)					W	1250
NOMINAL TOTAL INPUT POWER (HEATING)					W	998
NOMINAL RUNNING CURRENT (COOLING)					A	5.6
NOMINAL RUNNING CURRENT (HEATING)					A	4.5
POWER SOURCE					V/Ph/Hz	220 - 240 / 1 / 50
EER					W/W	2.82
COP					W/W	3.53
REFRIGERANT TYPE						R22
REFRIGERANT CONTROL (EXPANSION DEVICE)						OUTDOOR CAP. TUBE
INDOOR UNIT	CONTROL	AIR DISCHARGE				AUTOMATIC LOUVER (UP & DOWN)
		OPERATION				WIRELESS OR WIRED MICROCOMPUTER REMOTE CONTROL
	AIR FLOW	HIGH			l/s / CFM	240 / 508
		MEDIUM			l/s / CFM	182 / 386
		LOW			l/s / CFM	165 / 350
	EXTERNAL STATIC PRESSURE (H/M/L)				Pa / in.wg.	0
	SOUND PRESSURE LEVEL (H/M/L)				dBA	48 / 43 / 41
	UNIT DIMENSION	HEIGHT			mm/in	218 / 8.6
		WIDTH			mm/in	1080 / 42.5
		DEPTH			mm/in	630 / 24.8
	PACKING DIMENSION	HEIGHT			mm/in	297 / 11.7
		WIDTH			mm/in	1197 / 47.1
		DEPTH			mm/in	740 / 29.1
	UNIT WEIGHT				kg/lb	26
	CONDENSATE DRAIN SIZE				mm/in	19.1 / 3/4
OUTDOOR UNIT	AIR FLOW				l/s / CFM	453 / 960
	SOUND PRESSURE LEVEL				dBA	49
	UNIT DIMENSION	HEIGHT			mm/in	540 / 21.3
		WIDTH			mm/in	700 / 27.6
		DEPTH			mm/in	250 / 9.8
	PACKING DIMENSION	HEIGHT			mm/in	620 / 24.4
		WIDTH			mm/in	810 / 31.9
		DEPTH			mm/in	330 / 13.0
	UNIT WEIGHT				kg/lb	32 / 71
	PIPE CONNECTION	TYPE				FLARE VALVE
		SIZE	LIQUID		mm/in	6.4 / 1/4
			GAS		mm/in	12.7 / 1/2
REFRIGERANT CHARGE					kg/lb	1.20 / 2.65

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a) COOLING - 27°C DB / 19°C WB INDOOR AND 35°C DB / 24°C WB OUTDOOR
b) HEATING - 20°C DB INDOOR AND 7°C DB / 6°C WB OUTDOOR
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS B 8615 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE UNIT.

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GENERAL DATA - HEATPUMP (R22)

MODEL					INDOOR UNIT	ACM 20ER	
					OUTDOOR UNIT	ALC 18CR	ALC 20CR
NOMINAL COOLING CAPACITY					Btu/h	18000	19000
					W	5280	5570
NOMINAL HEATING CAPACITY					Btu/h	18500	19500
					W	5420	5720
NOMINAL TOTAL INPUT POWER (COOLING)					W	1870	1861
NOMINAL TOTAL INPUT POWER (HEATING)					W	1710	1811
NOMINAL RUNNING CURRENT (COOLING)					A	8.4	8.2
NOMINAL RUNNING CURRENT (HEATING)					A	7.7	8.0
POWER SOURCE					V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
EER					W/W	2.82	2.99
COP					W/W	3.17	3.16
REFRIGERANT TYPE						R22	
REFRIGERANT CONTROL (EXPANSION DEVICE)						OUTDOOR CAP. TUBE	
INDOOR UNIT	CONTROL	AIR DISCHARGE				AUTOMATIC LOUVER (UP & DOWN)	
		OPERATION				WIRELESS OR WIRED MICROCOMPUTER REMOTE CONTROL	
	AIR FLOW	HIGH			l/s / CFM	245 / 520	
		MEDIUM			l/s / CFM	217 / 460	
		LOW			l/s / CFM	192 / 406	
	EXTERNAL STATIC PRESSURE (H/M/L)				Pa / in.wg.	0	
	SOUND PRESSURE LEVEL (H/M/L)				dBA	48 / 46 / 43	
	UNIT DIMENSION	HEIGHT			mm/in	218 / 8.6	
		WIDTH			mm/in	1080 / 42.5	
		DEPTH			mm/in	630 / 24.8	
	PACKING DIMENSION	HEIGHT			mm/in	297 / 11.7	
		WIDTH			mm/in	1197 / 47.1	
		DEPTH			mm/in	740 / 29.1	
	UNIT WEIGHT				kg/lb	27 / 60	
	CONDENSATE DRAIN SIZE				mm/in	19.1 / 3/4	
OUTDOOR UNIT	AIR FLOW				l/s / CFM	614 / 1300	
	SOUND PRESSURE LEVEL				dBA	51	
	UNIT DIMENSION	HEIGHT			mm/in	648 / 25.5	
		WIDTH			mm/in	855 / 33.7	
		DEPTH			mm/in	328 / 12.9	
	PACKING DIMENSION	HEIGHT			mm/in	710 / 28.0	
		WIDTH			mm/in	990 / 39.0	
		DEPTH			mm/in	415 / 16.3	
	UNIT WEIGHT				kg/lb	58 / 128	59 / 130
	PIPE CONNECTION	TYPE				FLARE VALVE	
		SIZE	LIQUID		mm/in	6.4 / 1/4	
			GAS		mm/in	15.9 / 5/8	
REFRIGERANT CHARGE					kg/lb	0.85 / 1.87	1.35 / 2.98

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a) COOLING - 27°C DB / 19°C WB INDOOR AND 35°C DB / 24°C WB OUTDOOR
b) HEATING - 20°C DB INDOOR AND 7°C DB / 6°C WB OUTDOOR
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS B 8615 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE UNIT.

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GENERAL DATA - HEATPUMP (R22)

MODEL					INDOOR UNIT	ACM 25ER
					OUTDOOR UNIT	ALC 25CR
NOMINAL COOLING CAPACITY					Btu/h	24000
					W	7030
NOMINAL HEATING CAPACITY					Btu/h	25000
					W	7330
NOMINAL TOTAL INPUT POWER (COOLING)					W	2573
NOMINAL TOTAL INPUT POWER (HEATING)					W	2493
NOMINAL RUNNING CURRENT (COOLING)					A	11.5
NOMINAL RUNNING CURRENT (HEATING)					A	11.2
POWER SOURCE					V/Ph/Hz	220 - 240 / 1 / 50
EER					W/W	2.73
COP					W/W	2.94
REFRIGERANT TYPE						R22
REFRIGERANT CONTROL (EXPANSION DEVICE)						OUTDOOR CAP. TUBE
INDOOR UNIT	CONTROL	AIR DISCHARGE				AUTOMATIC LOUVER (UP & DOWN)
		OPERATION				WIRELESS OR WIRED MICROCOMPUTER REMOTE CONTROL
	AIR FLOW	HIGH			l/s / CFM	274 / 580
		MEDIUM			l/s / CFM	250 / 530
		LOW			l/s / CFM	231 / 490
	EXTERNAL STATIC PRESSURE (H/M/L)				Pa / in.wg.	0
	SOUND PRESSURE LEVEL (H/M/L)				dBA	50 / 47 / 46
	UNIT DIMENSION	HEIGHT			mm/in	218 / 8.6
		WIDTH			mm/in	1080 / 42.5
		DEPTH			mm/in	630 / 24.8
	PACKING DIMENSION	HEIGHT			mm/in	297 / 11.7
		WIDTH			mm/in	1197 / 47.1
		DEPTH			mm/in	740 / 29.1
	UNIT WEIGHT				kg/lb	27 / 60
	CONDENSATE DRAIN SIZE				mm/in	19.1 / 3/4
OUTDOOR UNIT	AIR FLOW				l/s / CFM	755 / 1600
	SOUND PRESSURE LEVEL				dBA	52
	UNIT DIMENSION	HEIGHT			mm/in	750 / 29.5
		WIDTH			mm/in	855 / 33.7
		DEPTH			mm/in	328 / 12.9
	PACKING DIMENSION	HEIGHT			mm/in	810 / 31.9
		WIDTH			mm/in	990 / 39.0
		DEPTH			mm/in	415 / 16.3
	UNIT WEIGHT				kg/lb	62 / 137
	PIPE CONNECTION	TYPE				FLARE VALVE
		SIZE	LIQUID		mm/in	9.5 / 3/8
			GAS		mm/in	15.9 / 5/8
REFRIGERANT CHARGE					kg/lb	1.50 / 3.31

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a) COOLING - 27°C DB / 19°C WB INDOOR AND 35°C DB / 24°C WB OUTDOOR
b) HEATING - 20°C DB INDOOR AND 7°C DB / 6°C WB OUTDOOR
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GENERAL DATA - HEATPUMP (R22)

MODEL					INDOOR UNIT	ACM 28ER	
					OUTDOOR UNIT	ALC 28CR	ALC 30CR
NOMINAL COOLING CAPACITY					Btu/h	28000	28000
					W	8210	8210
NOMINAL HEATING CAPACITY					Btu/h	28500	28500
					W	8350	8350
NOMINAL TOTAL INPUT POWER (COOLING)					W	2862	2747
NOMINAL TOTAL INPUT POWER (HEATING)					W	2902	2954
NOMINAL RUNNING CURRENT (COOLING)					A	13.7	13.3
NOMINAL RUNNING CURRENT (HEATING)					A	13.8	14.1
POWER SOURCE					V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
EER					W/W	2.87	2.99
COP					W/W	2.88	2.83
REFRIGERANT TYPE						R22	R22
REFRIGERANT CONTROL (EXPANSION DEVICE)						OUTDOOR CAP. TUBE	OUTDOOR CAP TUBE + TXV
INDOOR UNIT	CONTROL	AIR DISCHARGE				AUTOMATIC LOUVER (UP & DOWN)	
		OPERATION				WIRELESS OR WIRED MICROCOMPUTER REMOTE CONTROL	
	AIR FLOW	HIGH			l/s / CFM	302 / 640	
		MEDIUM			l/s / CFM	264 / 560	
		LOW			l/s / CFM	217 / 460	
	EXTERNAL STATIC PRESSURE (H/M/L)				Pa / in.wg.	0	
	SOUND PRESSURE LEVEL (H/M/L)				dBA	56 / 51 / 44	
	UNIT DIMENSION	HEIGHT			mm/in	218 / 8.6	
		WIDTH			mm/in	1080 / 42.5	
		DEPTH			mm/in	630 / 24.8	
	PACKING DIMENSION	HEIGHT			mm/in	297 / 11.7	
		WIDTH			mm/in	1197 / 47.1	
		DEPTH			mm/in	740 / 29.1	
	UNIT WEIGHT				kg/lb	28 / 62	
	CONDENSATE DRAIN SIZE				mm/in	19.1 / 3/4	
OUTDOOR UNIT	AIR FLOW				l/s / CFM	741 / 1570	1605 / 3400
	SOUND PRESSURE LEVEL				dBA	54	58
	UNIT DIMENSION	HEIGHT			mm/in	750 / 29.5	850 / 33.5
		WIDTH			mm/in	855 / 33.7	1030 / 40.6
		DEPTH			mm/in	328 / 12.9	400 / 15.8
	PACKING DIMENSION	HEIGHT			mm/in	810 / 31.9	1000 / 39.4
		WIDTH			mm/in	990 / 39.0	1200 / 47.2
		DEPTH			mm/in	415 / 16.3	560 / 22.1
	UNIT WEIGHT				kg/lb	68 / 150	95 / 209
	PIPE CONNECTION	TYPE				FLARE VALVE	
		SIZE	LIQUID		mm/in	9.5 / 3/8	9.5 / 3/8
			GAS		mm/in	15.9 / 5/8	15.9 / 5/8
REFRIGERANT CHARGE					kg/lb	2.40 / 5.30	2.15 / 4.12

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3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - 27°C DB / 19°C WB INDOOR AND 35°C DB / 24°C WB OUTDOOR
b) HEATING - 20°C DB INDOOR AND 7°C DB / 6°C WB OUTDOOR
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS B 8615 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE UNIT.

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GENERAL DATA - COOLING ONLY (R410A)

MODEL					INDOOR UNIT		A5CM 15E
					OUTDOOR UNIT		A5LC 15C
NOMINAL CAPACITY						Btu/h	12900
						W	3780
NOMINAL TOTAL INPUT POWER						W	1280
NOMINAL RUNNING CURRENT						A	5.8
POWER SOURCE						V/Ph/Hz	220 - 240 / 1 / 50
EER						W/W	2.95
REFRIGERANT TYPE							R410A
REFRIGERANT CONTROL (EXPANSION DEVICE)							OUTDOOR CAP. TUBE
INDOOR UNIT	CONTROL		AIR DISCHARGE				AUTOMATIC LOUVER (UP & DOWN)
			OPERATION				WIRELESS OR WIRED MICROCOMPUTER REMOTE CONTROL
	AIR FLOW		HIGH			l/s / CFM	240 / 508
			MEDIUM			l/s / CFM	182 / 386
			LOW			l/s / CFM	165 / 350
	EXTERNAL STATIC PRESSURE (H/M/L)					Pa / in.wg.	0
	SOUND PRESSURE LEVEL (H/M/L)					dBA	48 / 43 / 41
	UNIT DIMENSION		HEIGHT			mm/in	218 / 8.6
			WIDTH			mm/in	1080 / 42.5
			DEPTH			mm/in	630 / 24.8
	PACKING DIMENSION		HEIGHT			mm/in	297 / 11.7
			WIDTH			mm/in	1197 / 47.1
			DEPTH			mm/in	740 / 29.1
	UNIT WEIGHT					kg/lb	26
	CONDENSATE DRAIN SIZE					mm/in	19.1 / 3/4
OUTDOOR UNIT	AIR FLOW					l/s / CFM	453 / 960
	SOUND PRESSURE LEVEL					dBA	49
	UNIT DIMENSION		HEIGHT			mm/in	540 / 21.3
			WIDTH			mm/in	700 / 27.6
			DEPTH			mm/in	250 / 9.8
	PACKING DIMENSION		HEIGHT			mm/in	620 / 24.4
			WIDTH			mm/in	810 / 31.9
			DEPTH			mm/in	330 / 13.0
	UNIT WEIGHT					kg/lb	32 / 71
	PIPE CONNECTION		TYPE				FLARE VALVE
			SIZE	LIQUID		mm/in	6.4 / 1/4
				GAS		mm/in	12.7 / 1/2
REFRIGERANT CHARGE						kg/lb	0.83 / 1.83

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3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
COOLING - 27°C DB / 19°C WB INDOOR AND 35°C DB / 24°C WB OUTDOOR
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS B 8615 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE UNIT.

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GENERAL DATA - COOLING ONLY (R410A)

MODEL		INDOOR UNIT			A5CM 20E	A5CM 25E
		OUTDOOR UNIT			A5LC 20C	A5LC 25C
NOMINAL CAPACITY - 1Ø / <3Ø>				Btu/h	17500 / <18100>	20000 / <22860>
				W	5130 / <5300>	5860 / <6700>
NOMINAL TOTAL INPUT POWER - 1Ø / <3Ø>				W	1723 / <1757>	1973 / <2231>
NOMINAL RUNNING CURRENT - 1Ø / <3Ø>				A	7.6 / <3.3>	8.8 / <4.2>
POWER SOURCE				V/Ph/Hz	220 - 240 / 1 / 50 / <380 - 415 / 3 / 50>	
EER - 1Ø / <3Ø>				W/W	2.98 / <3.02>	2.97 / <3.00>
REFRIGERANT TYPE					R410A	
REFRIGERANT CONTROL (EXPANSION DEVICE)					OUTDOOR CAP. TUBE	
INDOOR UNIT	CONTROL	AIR DISCHARGE			AUTOMATIC LOUVER (UP & DOWN)	
		OPERATION			WIRELESS OR WIRED MICROCOMPUTER REMOTE CONTROL	
	AIR FLOW	HIGH		l/s / CFM	245 / 520	274 / 580
		MEDIUM		l/s / CFM	217 / 460	250 / 530
		LOW		l/s / CFM	192 / 406	231 / 490
	EXTERNAL STATIC PRESSURE (H/M/L)			Pa / in.wg.	0	0
	SOUND PRESSURE LEVEL (H/M/L)			dBA	48 / 46 / 43	50 / 47 / 46
	UNIT DIMENSION	HEIGHT		mm/in	218 / 8.6	
		WIDTH		mm/in	1080 / 42.5	
		DEPTH		mm/in	630 / 24.8	
	PACKING DIMENSION	HEIGHT		mm/in	297 / 11.7	
		WIDTH		mm/in	1197 / 47.1	
		DEPTH		mm/in	740 / 29.1	
	UNIT WEIGHT			kg/lb	27 / 60	
	CONDENSATE DRAIN SIZE			mm/in	19.1 / 3/4	
OUTDOOR UNIT	AIR FLOW			l/s / CFM	614 / 1300	689 / 1460
	SOUND PRESSURE LEVEL			dBA	52	52
	UNIT DIMENSION	HEIGHT		mm/in	648 / 25.5	750 / 29.5
		WIDTH		mm/in	855 / 33.7	855 / 33.7
		DEPTH		mm/in	328 / 12.9	328 / 12.9
	PACKING DIMENSION	HEIGHT		mm/in	710 / 28.0	810 / 31.9
		WIDTH		mm/in	990 / 39.0	990 / 39.0
		DEPTH		mm/in	415 / 16.3	415 / 16.3
	UNIT WEIGHT			kg/lb	59 / 130	62 / 137
	PIPE CONNECTION	TYPE			FLARE VALVE	
		SIZE	LIQUID	mm/in	6.4 / 1/4	6.4 / 1/4
			GAS	mm/in	12.7 / 1/2	15.9 / 5/8
REFRIGERANT CHARGE				kg/lb	1.40 / 3.09	1.65 / 3.64

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COOLING - 27°C DB / 19°C WB INDOOR AND 35°C DB / 24°C WB OUTDOOR
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GENERAL DATA - COOLING ONLY (R410A)

MODEL				INDOOR UNIT	A5CM 28E	
				OUTDOOR UNIT	A5LC 28C	A5LC 35C
NOMINAL CAPACITY - 1Ø / <3Ø>				Btu/h	26000 / <26000>	30000 / <30000>
				W	7620/ <7620>	8790 / <8790>
NOMINAL TOTAL INPUT POWER - 1Ø / <3Ø>				W	2670 / <2715>	2917 / <2817>
NOMINAL RUNNING CURRENT - 1Ø / <3Ø>				A	12.6 / <4.7>	14.5 / <3.6>
POWER SOURCE				V/Ph/Hz	220 - 240 / 1 / 50 / <380 - 415 / 3 / 50>	
EER - 1Ø / <3Ø>				W/W	2.85 / <2.81>	3.01 / <3.12>
REFRIGERANT TYPE					R410A	R410A
REFRIGERANT CONTROL (EXPANSION DEVICE)					OUTDOOR CAP. TUBE	OUTDOOR CAP. TUBE & TXV
INDOOR UNIT	CONTROL	AIR DISCHARGE			AUTOMATIC LOUVER (UP & DOWN)	
		OPERATION			WIRELESS OR WIRED MICROCOMPUTER REMOTE CONTROL	
	AIR FLOW	HIGH		l/s / CFM	302 / 640	
		MEDIUM		l/s / CFM	264 / 560	
		LOW		l/s / CFM	217 / 460	
	EXTERNAL STATIC PRESSURE (H/M/L)			Pa / in.wg.	0	
	SOUND PRESSURE LEVEL (H/M/L)			dBA	56 / 51 / 44	
	UNIT DIMENSION	HEIGHT		mm/in	218 / 8.6	
		WIDTH		mm/in	1080 / 42.5	
		DEPTH		mm/in	630 / 24.8	
	PACKING DIMENSION	HEIGHT		mm/in	297 / 11.7	
		WIDTH		mm/in	1197 / 47.1	
		DEPTH		mm/in	740 / 29.1	
	UNIT WEIGHT			kg/lb	28 / 62	
	CONDENSATE DRAIN SIZE			mm/in	19.1 / 3/4	
OUTDOOR UNIT	AIR FLOW			l/s / CFM	684 / 1450	1605 / 3400
	SOUND PRESSURE LEVEL			dBA	54	58
	UNIT DIMENSION	HEIGHT		mm/in	750 / 29.5	850 / 33.5
		WIDTH		mm/in	855 / 33.7	1030 / 40.6
		DEPTH		mm/in	328 / 12.9	400 / 15.8
	PACKING DIMENSION	HEIGHT		mm/in	810 / 31.9	1000 / 39.4
		WIDTH		mm/in	990 / 39.0	1200 / 47.2
		DEPTH		mm/in	415 / 16.3	560 / 22.1
	UNIT WEIGHT			kg/lb	68 / 150	95 / 209
	PIPE CONNECTION	TYPE			FLARE VALVE	
		SIZE	LIQUID	mm/in	9.5 / 3/8	9.5 / 3/8
			GAS	mm/in	15.9 / 5/8	15.9 / 5/8
REFRIGERANT CHARGE				kg/lb	1.70 / 3.75	1.90 / 4.19

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COOLING - 27°C DB / 19°C WB INDOOR AND 35°C DB / 24°C WB OUTDOOR
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GENERAL DATA - HEATPUMP (R410A)

MODEL				INDOOR UNIT		A5CM 15ER
				OUTDOOR UNIT		A5LC 15CR
NOMINAL COOLING CAPACITY					Btu/h	12900
					W	3780
NOMINAL HEATING CAPACITY					Btu/h	11800
					W	3460
NOMINAL TOTAL INPUT POWER (COOLING)					W	1268
NOMINAL TOTAL INPUT POWER (HEATING)					W	1138
NOMINAL RUNNING CURRENT (COOLING)					A	6.0
NOMINAL RUNNING CURRENT (HEATING)					A	5.1
POWER SOURCE					V/Ph/Hz	220 - 240 / 1 / 50
EER					W/W	2.98
COP					W/W	3.04
REFRIGERANT TYPE						R410A
REFRIGERANT CONTROL (EXPANSION DEVICE)						OUTDOOR CAP. TUBE
INDOOR UNIT	CONTROL		AIR DISCHARGE			AUTOMATIC LOUVER (UP & DOWN)
			OPERATION			WIRELESS OR WIRED MICROCOMPUTER REMOTE CONTROL
	AIR FLOW		HIGH		l/s / CFM	240 / 508
			MEDIUM		l/s / CFM	182 / 386
			LOW		l/s / CFM	165 / 350
	EXTERNAL STATIC PRESSURE (H/M/L)				Pa / in.wg.	0
	SOUND PRESSURE LEVEL (H/M/L)				dBA	48 / 43 / 41
	UNIT DIMENSION		HEIGHT		mm/in	218 / 8.6
			WIDTH		mm/in	1080 / 42.5
			DEPTH		mm/in	630 / 24.8
	PACKING DIMENSION		HEIGHT		mm/in	297 / 11.7
			WIDTH		mm/in	1197 / 47.1
			DEPTH		mm/in	740 / 29.1
	UNIT WEIGHT				kg/lb	26
	CONDENSATE DRAIN SIZE				mm/in	19.1 / 3/4
OUTDOOR UNIT	AIR FLOW				l/s / CFM	453 / 960
	SOUND PRESSURE LEVEL				dBA	49
	UNIT DIMENSION		HEIGHT		mm/in	540 / 21.3
			WIDTH		mm/in	700 / 27.6
			DEPTH		mm/in	250 / 9.8
	PACKING DIMENSION		HEIGHT		mm/in	620 / 24.4
			WIDTH		mm/in	810 / 31.9
			DEPTH		mm/in	330 / 13.0
	UNIT WEIGHT				kg/lb	32 / 71
	PIPE CONNECTION		TYPE			FLARE VALVE
		SIZE	LIQUID		mm/in	6.4 / 1/4
			GAS		mm/in	12.7 / 1/2
REFRIGERANT CHARGE					kg/lb	0.83 / 1.83

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b) HEATING - 20°C DB INDOOR AND 7°C DB / 6°C WB OUTDOOR
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS B 8615 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE UNIT.

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GENERAL DATA - HEATPUMP (R410A)

MODEL				INDOOR UNIT	A5CM 20ER	A5CM 25ER
				OUTDOOR UNIT	A5LC 20CR	A5LC 25CR
NOMINAL COOLING CAPACITY - 1Ø / <3Ø>				Btu/h	17500 / <18100>	20000 / <26000>
				W	5130 / <5300>	5860 / <6700>
NOMINAL HEATING CAPACITY - 1Ø / <3Ø>				Btu/h	18500 / <18770>	22000 / <23200>
				W	5420 / <5500>	6450 / <6800>
NOMINAL TOTAL INPUT POWER (COOLING) - 1Ø / <3Ø>				W	1723 / <1757>	1973 / <2231>
NOMINAL TOTAL INPUT POWER (HEATING) - 1Ø / <3Ø>				W	1493 / <1527>	2003 / <2124>
NOMINAL RUNNING CURRENT (COOLING) - 1Ø / <3Ø>				A	7.6 / <3.3>	8.9 / <4.2>
NOMINAL RUNNING CURRENT (HEATING) - 1Ø / <3Ø>				A	6.6 / <2.8>	9.1 / <4.0>
POWER SOURCE				V/Ph/Hz	220 - 240 / 1 / 50 / <380 - 415 / 3 / 50>	
EER - 1Ø / <3Ø>				W/W	2.98 / <3.02>	2.97 / <3.00>
COP - 1Ø / <3Ø>				W/W	3.63 / <3.60>	3.22 / <3.20>
REFRIGERANT TYPE					R410A	
REFRIGERANT CONTROL (EXPANSION DEVICE)					OUTDOOR CAP. TUBE	
INDOOR UNIT	CONTROL	AIR DISCHARGE			AUTOMATIC LOUVER (UP & DOWN)	
		OPERATION			WIRELESS OR WIRED MICROCOMPUTER REMOTE CONTROL	
	AIR FLOW	HIGH		l/s / CFM	245 / 520	274 / 580
		MEDIUM		l/s / CFM	217 / 460	250 / 530
		LOW		l/s / CFM	192 / 406	231 / 490
	EXTERNAL STATIC PRESSURE (H/M/L)			Pa / in.wg.	0	0
	SOUND PRESSURE LEVEL (H/M/L)			dBA	48 / 46 / 43	50 / 47 / 46
	UNIT DIMENSION	HEIGHT		mm/in	218 / 8.6	
		WIDTH		mm/in	1080 / 42.5	
		DEPTH		mm/in	630 / 24.8	
	PACKING DIMENSION	HEIGHT		mm/in	297 / 11.7	
		WIDTH		mm/in	1197 / 47.1	
		DEPTH		mm/in	740 / 29.1	
	UNIT WEIGHT			kg/lb	27 / 60	
	CONDENSATE DRAIN SIZE			mm/in	19.1 / 3/4	
OUTDOOR UNIT	AIR FLOW			l/s / CFM	614 / 1300	689 / 1460
	SOUND PRESSURE LEVEL			dBA	52	52
	UNIT DIMENSION	HEIGHT		mm/in	648 / 25.5	750 / 29.5
		WIDTH		mm/in	855 / 33.7	855 / 33.7
		DEPTH		mm/in	328 / 12.9	328 / 12.9
	PACKING DIMENSION	HEIGHT		mm/in	810 / 31.9	810 / 31.9
		WIDTH		mm/in	990 / 39.0	990 / 39.0
		DEPTH		mm/in	415 / 16.3	415 / 16.3
	UNIT WEIGHT			kg/lb	59 / 130	62 / 137
	PIPE CONNECTION	TYPE			FLARE VALVE	
		SIZE	LIQUID	mm/in	6.4 / 1/4	6.4 / 1/4
			GAS	mm/in	12.7 / 1/2	15.9 / 5/8
REFRIGERANT CHARGE				kg/lb	1.40 / 3.09	1.65 / 3.64

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b) HEATING - 20°C DB INDOOR AND 7°C DB / 6°C WB OUTDOOR
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GENERAL DATA - HEATPUMP (R410A)

MODEL				INDOOR UNIT	A5CM 28ER	
				OUTDOOR UNIT	A5LC 28CR	A5LC 35CR
NOMINAL COOLING CAPACITY - 1Ø / <3Ø>				Btu/h	26000 / <26000>	30000 / <30000>
				W	7620 / <7620>	8790 / <8790>
NOMINAL HEATING CAPACITY - 1Ø / <3Ø>				Btu/h	26500 / <26500>	31000 / <31000>
				W	7770 / <7770>	9090 / <9090>
NOMINAL TOTAL INPUT POWER (COOLING) - 1Ø / <3Ø>				W	2670 / <2715>	2917 / <2817>
NOMINAL TOTAL INPUT POWER (HEATING) - 1Ø / <3Ø>				W	2420 / <2378>	2777 / <2667>
NOMINAL RUNNING CURRENT (COOLING) - 1Ø / <3Ø>				A	12.6 / <4.7>	14.5 / <3.6>
NOMINAL RUNNING CURRENT (HEATING) - 1Ø / <3Ø>				A	11.7 / <4.3>	13.6 / <3.4>
POWER SOURCE				V/Ph/Hz	220 - 240 / 1 / 50 / <380 - 415 / 3 / 50>	
EER - 1Ø / <3Ø>				W/W	2.85 / <2.81>	3.01 / <3.12>
COP - 1Ø / <3Ø>				W/W	3.21 / <3.27>	3.27 / <3.41>
REFRIGERANT TYPE					R410A	R410A
REFRIGERANT CONTROL (EXPANSION DEVICE)					OUTDOOR CAP. TUBE	OUTDOOR CAP. TUBE & TXV
INDOOR UNIT	CONTROL	AIR DISCHARGE			AUTOMATIC LOUVER (UP & DOWN)	
		OPERATION			WIRELESS OR WIRED MICROCOMPUTER REMOTE CONTROL	
	AIR FLOW	HIGH		l/s / CFM	302 / 640	
		MEDIUM		l/s / CFM	264 / 560	
		LOW		l/s / CFM	217 / 460	
	EXTERNAL STATIC PRESSURE (H/M/L)			Pa / in.wg.	0	
	SOUND PRESSURE LEVEL (H/M/L)			dBA	56 / 51 / 44	
	UNIT DIMENSION	HEIGHT		mm/in	218 / 8.6	
		WIDTH		mm/in	1080 / 42.5	
		DEPTH		mm/in	630 / 24.8	
	PACKING DIMENSION	HEIGHT		mm/in	297 / 11.7	
		WIDTH		mm/in	1197 / 47.1	
		DEPTH		mm/in	740 / 29.1	
	UNIT WEIGHT			kg/lb	28 / 62	
	CONDENSATE DRAIN SIZE			mm/in	19.1 / 3/4	
OUTDOOR UNIT	AIR FLOW			l/s / CFM	684 / 1450	1605 / 3400
	SOUND PRESSURE LEVEL			dBA	54	58
	UNIT DIMENSION	HEIGHT		mm/in	750 / 29.5	850 / 33.5
		WIDTH		mm/in	855 / 33.7	1030 / 40.6
		DEPTH		mm/in	328 / 12.9	400 / 15.8
	PACKING DIMENSION	HEIGHT		mm/in	810 / 31.9	1000 / 39.4
		WIDTH		mm/in	990 / 39.0	1200 / 47.2
		DEPTH		mm/in	415 / 16.3	560 / 22.1
	UNIT WEIGHT			kg/lb	68 / 150	95 / 209
	PIPE CONNECTION	TYPE			FLARE VALVE	
		SIZE	LIQUID	mm/in	9.5 / 3/8	9.5 / 3/8
			GAS	mm/in	15.9 / 5/8	15.9 / 5/8
REFRIGERANT CHARGE				kg/lb	1.70 / 3.75	1.90 / 4.19

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a) COOLING - 27°C DB / 19°C WB INDOOR AND 35°C DB / 24°C WB OUTDOOR
b) HEATING - 20°C DB INDOOR AND 7°C DB / 6°C WB OUTDOOR
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COMPONENTS DATA (R22)

MODEL	**INDOOR UNIT**				**ACM 15E**
	OUTDOOR UNIT				**ALC 15C**
INDOOR FAN	**TYPE**				CROSS FLOW
	QUANTITY				2
	MATERIAL				ABS
	DRIVE				DIRECT
	DIAMETER			**mm/in**	146 / 5.75
	LENGTH			**mm/in**	200 / 7.87
INDOOR FAN MOTOR	**TYPE**				INDUCTION
	QUANTITY				1
	INDEX OF PROTECTION (IP)				N/A
OUTDOOR FAN	**TYPE**				PROPELLER
	QUANTITY				1
	MATERIAL				GLASS REINFORCED ACRYL STYRENE RESIN
	DRIVE				DIRECT
	DIAMETER			**mm/in**	404 / 16
OUTDOOR FAN MOTOR	**TYPE**				INDUCTION
	QUANTITY				1
	INDEX OF PROTECTION (IP)				IP54
COMPRESSOR	**TYPE**				ROTARY
	OIL TYPE				ATMOS M60 or SUNISO 4GDID
	OIL AMOUNT			**cm^3 / fl.oz.**	350 / 11.8
INDOOR COIL	**TUBE**	**MATERIAL**			SEAMLESS INNER GROOVE COPPER
		DIAMETER		**mm/in**	7.00 / 0.276
		THICKNESS		**mm/in**	0.28 / 0.011
	FIN	**MATERIAL**			ALUMINIUM (SLIT FIN)
		THICKNESS		**mm/in**	0.11 / 0.0043
		FACE AREA		**m^2/ft^2**	0.27 / 2.90
		ROW			2
		FIN PER INCH			16
OUTDOOR COIL	**TUBE**	**MATERIAL**			SEAMLESS INNER GROOVE COPPER
		DIAMETER		**mm/in**	7.00 / 0.276
		THICKNESS		**mm/in**	0.28 / 0.011
	FIN	**MATERIAL**			ALUMINIUM (RAISE LANCE)
		THICKNESS		**mm/in**	0.10 / 0.004
		FACE AREA		**m^2/ft^2**	0.36 / 3.88
		ROW			1
		FIN PER INCH			20
AIR QUALITY	**FILTER**	**TYPE**			WASHABLE SARANET FILTER
		QUANTITY		**pc**	2
		SIZE	**LENGTH**	**mm/in**	309.20 / 12.17
			WIDTH	**mm/in**	383.00 / 15.08
			THICKNESS	**mm/in**	2.25 / 0.09
CASING	**INDOOR UNIT**			**MATERIAL**	PS
				FINISHING	ETCHING SURFACE
				COLOUR	LIGHT GREY
	OUTDOOR UNIT			**MATERIAL**	GALVANISED MILD STEEL
				FINISHING	POLYESTER POWDER
				COLOUR	LIGHT GREY

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COMPONENTS DATA (R22)

MODEL	INDOOR UNIT			ACM 20E	
	OUTDOOR UNIT			ALC 18C	ALC 20C
INDOOR FAN	TYPE			CROSS FLOW	
	QUANTITY			2	
	MATERIAL			ABS	
	DRIVE			DIRECT	
	DIAMETER		mm/in	146 / 5.75	
	LENGTH		mm/in	200 / 7.87	
INDOOR FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	
	INDEX OF PROTECTION (IP)			N/A	
OUTDOOR FAN	TYPE			PROPELLER	
	QUANTITY			1	
	MATERIAL			GLASS REINFORCED ACRYL STYRENE RESIN	
	DRIVE			DIRECT	
	DIAMETER		mm/in	457 / 18	
OUTDOOR FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	
	INDEX OF PROTECTION (IP)			IP54	
COMPRESSOR	TYPE			ROTARY	
	OIL TYPE			ATMOS NM56M or SUNISO 4GDID	
	OIL AMOUNT		cm^3 / fl.oz.	670 / 23.6	
INDOOR COIL	TUBE	MATERIAL		SEAMLESS INNER GROOVE COPPER	
		DIAMETER	mm/in	7.00 / 0.276	
		THICKNESS	mm/in	0.28 / 0.011	
	FIN	MATERIAL		ALUMINIUM (SLIT FIN)	
		THICKNESS	mm/in	0.11 / 0.0043	
		FACE AREA	m^2/ft^2	0.27 / 2.90	
		ROW		2	
		FIN PER INCH		18	
OUTDOOR COIL	TUBE	MATERIAL		SEAMLESS INNER GROOVE COPPER	
		DIAMETER	mm/in	7.00 / 0.276	
		THICKNESS	mm/in	0.28 / 0.011	
	FIN	MATERIAL		ALUMINIUM (RAISE LANCE)	
		THICKNESS	mm/in	0.10 / 0.004	
		FACE AREA	m^2/ft^2	0.52 / 5.59	
		ROW		1	2
		FIN PER INCH		20	24
AIR QUALITY	FILTER	TYPE		WASHABLE SARANET FILTER	
		QUANTITY	pc	2	
		SIZE LENGTH	mm/in	309.20 / 12.17	
		SIZE WIDTH	mm/in	383.00 / 15.08	
		SIZE THICKNESS	mm/in	2.25 / 0.09	
CASING	INDOOR UNIT		MATERIAL	PS	
			FINISHING	ETCHING SURFACE	
			COLOUR	LIGHT GREY	
	OUTDOOR UNIT		MATERIAL	GALVANISED MILD STEEL	
			FINISHING	POLYESTER POWDER	
			COLOUR	LIGHT GREY	

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COMPONENTS DATA (R22)

MODEL	**INDOOR UNIT**				**ACM 25E**
	OUTDOOR UNIT				**ALC 25C**
INDOOR FAN	**TYPE**				CROSS FLOW
	QUANTITY				2
	MATERIAL				ABS
	DRIVE				DIRECT
	DIAMETER			**mm/in**	146 / 5.75
	LENGTH			**mm/in**	200 / 7.87
INDOOR FAN MOTOR	**TYPE**				INDUCTION
	QUANTITY				1
	INDEX OF PROTECTION (IP)				N/A
OUTDOOR FAN	**TYPE**				PROPELLER
	QUANTITY				1
	MATERIAL				GLASS REINFORCED ACRYL STYRENE RESIN
	DRIVE				DIRECT
	DIAMETER			**mm/in**	457 / 18
OUTDOOR FAN MOTOR	**TYPE**				INDUCTION
	QUANTITY				1
	INDEX OF PROTECTION (IP)				IP54
COMPRESSOR	**TYPE**				ROTARY
	OIL TYPE				ATMOS NM56M or SUNISO 4GDID
	OIL AMOUNT			**cm^3 / fl.oz.**	700 / 24.6
INDOOR COIL	**TUBE**	**MATERIAL**			SEAMLESS INNER GROOVE COPPER
		DIAMETER		**mm/in**	7.00 / 0.276
		THICKNESS		**mm/in**	0.28 / 0.011
	FIN	**MATERIAL**			ALUMINIUM (SLIT FIN)
		THICKNESS		**mm/in**	0.11 / 0.0043
		FACE AREA		**m^2/ft^2**	0.27 / 2.90
		ROW			3
		FIN PER INCH			18
OUTDOOR COIL	**TUBE**	**MATERIAL**			SEAMLESS INNER GROOVE COPPER
		DIAMETER		**mm/in**	7.00 / 0.276
		THICKNESS		**mm/in**	0.28 / 0.011
	FIN	**MATERIAL**			ALUMINIUM (RAISE LANCE)
		THICKNESS		**mm/in**	0.10 / 0.004
		FACE AREA		**m^2/ft^2**	0.62 / 6.67
		ROW			2
		FIN PER INCH			18
AIR QUALITY	**FILTER**	**TYPE**			WASHABLE SARANET FILTER
		QUANTITY		**pc**	2
		SIZE	**LENGTH**	**mm/in**	309.20 / 12.17
			WIDTH	**mm/in**	383.00 / 15.08
			THICKNESS	**mm/in**	2.25 / 0.09
CASING	**INDOOR UNIT**			**MATERIAL**	PS
				FINISHING	ETCHING SURFACE
				COLOUR	LIGHT GREY
	OUTDOOR UNIT			**MATERIAL**	GALVANISED MILD STEEL
				FINISHING	POLYESTER POWDER
				COLOUR	LIGHT GREY

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COMPONENTS DATA (R22)

MODEL	INDOOR UNIT			ACM 28E	
	OUTDOOR UNIT			ALC 28C	ALC 30C
INDOOR FAN	TYPE			CROSS FLOW	
	QUANTITY			2	
	MATERIAL			ABS	
	DRIVE			DIRECT	
	DIAMETER		mm/in	146 / 5.75	
	LENGTH		mm/in	200 / 7.87	
INDOOR FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	
	INDEX OF PROTECTION (IP)			N/A	
OUTDOOR FAN	TYPE			PROPELLER	
	QUANTITY			1	
	MATERIAL			GLASS REINFORCED ACRYL STYRENE RESIN	
	DRIVE			DIRECT	
	DIAMETER		mm/in	457 / 18	609.6 / 24
OUTDOOR FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	
	INDEX OF PROTECTION (IP)			IP54	-
COMPRESSOR	TYPE			ROTARY	SCROLL
	OIL TYPE			ATMOS M60 or SUNISO 4GDID	MINERAL (Sontex 200 LT)
	OIL AMOUNT		cm^3 / fl.oz.	1130 / 39.8	1240 / 43.6
INDOOR COIL	TUBE	MATERIAL		SEAMLESS INNER GROOVE COPPER	
		DIAMETER	mm/in	7.00 / 0.276	
		THICKNESS	mm/in	0.28 / 0.011	
	FIN	MATERIAL		ALUMINIUM (SLIT FIN)	
		THICKNESS	mm/in	0.11 / 0.0043	
		FACE AREA	m^2/ft^2	0.27 / 2.90	
		ROW		3	
		FIN PER INCH		18	
OUTDOOR COIL	TUBE	MATERIAL		SEAMLESS INNER GROOVE COPPER	SEAMLESS COPPER
		DIAMETER	mm/in	9.52 / 3/8	9.52 / 3/8
		THICKNESS	mm/in	0.33 / 0.013	0.35 / 0.014
	FIN	MATERIAL		ALUMINIUM (SLIT FIN)	ALUMINIUM (SLIT FIN)
		THICKNESS	mm/in	0.12 / 0.005	0.12 / 0.005
		FACE AREA	m^2/ft^2	0.61 / 6.52	0.87 / 9.33
		ROW		2	1
		FIN PER INCH		18	16
AIR QUALITY	FILTER	TYPE		WASHABLE SARANET FILTER	
		QUANTITY	pc	2	
		SIZE LENGTH	mm/in	309.20 / 12.17	
		SIZE WIDTH	mm/in	383.00 / 15.08	
		SIZE THICKNESS	mm/in	2.25 / 0.09	
CASING	INDOOR UNIT		MATERIAL	PS	
			FINISHING	ETCHING SURFACE	
			COLOUR	LIGHT GREY	
	OUTDOOR UNIT		MATERIAL	GALVANISED MILD STEEL	
			FINISHING	POLYESTER POWDER	
			COLOUR	LIGHT GREY	

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COMPONENTS DATA (R22)

MODEL	**INDOOR UNIT**				**ACM 15ER**
	OUTDOOR UNIT				**ALC 15CR**
INDOOR FAN	**TYPE**				CROSS FLOW
	QUANTITY				2
	MATERIAL				ABS
	DRIVE				DIRECT
	DIAMETER			**mm/in**	146 / 5.75
	LENGTH			**mm/in**	200 / 7.87
INDOOR FAN MOTOR	**TYPE**				INDUCTION
	QUANTITY				1
	INDEX OF PROTECTION (IP)				N/A
OUTDOOR FAN	**TYPE**				PROPELLER
	QUANTITY				1
	MATERIAL				GLASS REINFORCED ACRYL STYRENE RESIN
	DRIVE				DIRECT
	DIAMETER			**mm/in**	404 / 16
OUTDOOR FAN MOTOR	**TYPE**				INDUCTION
	QUANTITY				1
	INDEX OF PROTECTION (IP)				IP54
COMPRESSOR	**TYPE**				ROTARY
	OIL TYPE				ATMOS M60 or SUNISO 4GDID
	OIL AMOUNT			**cm^3 / fl.oz.**	350 / 11.8
INDOOR COIL	**TUBE**	**MATERIAL**			SEAMLESS INNER GROOVE COPPER
		DIAMETER		**mm/in**	7.00 / 0.276
		THICKNESS		**mm/in**	0.28 / 0.011
	FIN	**MATERIAL**			ALUMINIUM (SLIT FIN)
		THICKNESS		**mm/in**	0.11 / 0.0043
		FACE AREA		**m^2/ft^2**	0.27 / 2.90
		ROW			2
		FIN PER INCH			16
OUTDOOR COIL	**TUBE**	**MATERIAL**			SEAMLESS INNER GROOVE COPPER
		DIAMETER		**mm/in**	7.00 / 0.276
		THICKNESS		**mm/in**	0.28 / 0.011
	FIN	**MATERIAL**			ALUMINIUM (RAISE LANCE)
		THICKNESS		**mm/in**	0.10 / 0.004
		FACE AREA		**m^2/ft^2**	0.36 / 3.88
		ROW			1
		FIN PER INCH			20
AIR QUALITY	**FILTER**	**TYPE**			WASHABLE SARANET FILTER
		QUANTITY		**pc**	2
		SIZE	**LENGTH**	**mm/in**	309.20 / 12.17
			WIDTH	**mm/in**	383.00 / 15.08
			THICKNESS	**mm/in**	2.25 / 0.09
CASING	**INDOOR UNIT**			**MATERIAL**	PS
				FINISHING	ETCHING SURFACE
				COLOUR	LIGHT GREY
	OUTDOOR UNIT			**MATERIAL**	GALVANISED MILD STEEL
				FINISHING	POLYESTER POWDER
				COLOUR	LIGHT GREY

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COMPONENTS DATA (R22)

MODEL	INDOOR UNIT			ACM 20ER	
	OUTDOOR UNIT			ALC 18CR	ALC 20CR
INDOOR FAN	TYPE			CROSS FLOW	
	QUANTITY			2	
	MATERIAL			ABS	
	DRIVE			DIRECT	
	DIAMETER		mm/in	146 / 5.75	
	LENGTH		mm/in	200 / 7.87	
INDOOR FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	
	INDEX OF PROTECTION (IP)			N/A	
OUTDOOR FAN	TYPE			PROPELLER	
	QUANTITY			1	
	MATERIAL			GLASS REINFORCED ACRYL STYRENE RESIN	
	DRIVE			DIRECT	
	DIAMETER		mm/in	457 / 18.0	
OUTDOOR FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	
	INDEX OF PROTECTION (IP)			IP54	
COMPRESSOR	TYPE			ROTARY	
	OIL TYPE			ATMOS NM56M or SUNISO 4GDID	
	OIL AMOUNT		cm^3 / fl.oz.	670 / 23.6	
INDOOR COIL	TUBE	MATERIAL		SEAMLESS INNER GROOVE COPPER	
		DIAMETER	mm/in	7.00 / 0.276	
		THICKNESS	mm/in	0.28 / 0.011	
	FIN	MATERIAL		ALUMINIUM (SLIT FIN)	
		THICKNESS	mm/in	0.11 / 0.0043	
		FACE AREA	m^2/ft^2	0.27 / 2.90	
		ROW		2	
		FIN PER INCH		18	
OUTDOOR COIL	TUBE	MATERIAL		SEAMLESS INNER GROOVE COPPER	
		DIAMETER	mm/in	7.00 / 0.276	
		THICKNESS	mm/in	0.28 / 0.011	
	FIN	MATERIAL		ALUMINIUM (RAISE LANCE)	
		THICKNESS	mm/in	0.10 / 0.004	
		FACE AREA	m^2/ft^2	0.52 / 5.59	
		ROW		1	2
		FIN PER INCH		20	24
AIR QUALITY	FILTER	TYPE		WASHABLE SARANET FILTER	
		QUANTITY	pc	2	
		SIZE LENGTH	mm/in	309.20 / 12.17	
		SIZE WIDTH	mm/in	383.00 / 15.08	
		SIZE THICKNESS	mm/in	2.25 / 0.09	
CASING	INDOOR UNIT		MATERIAL	PS	
			FINISHING	ETCHING SURFACE	
			COLOUR	LIGHT GREY	
	OUTDOOR UNIT		MATERIAL	GALVANISED MILD STEEL	
			FINISHING	POLYESTER POWDER	
			COLOUR	LIGHT GREY	

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COMPONENTS DATA (R22)

MODEL	**INDOOR UNIT**				**ACM 25ER**
	OUTDOOR UNIT				**ALC 25CR**
INDOOR FAN	**TYPE**				CROSS FLOW
	QUANTITY				2
	MATERIAL				ABS
	DRIVE				DIRECT
	DIAMETER			**mm/in**	146 / 5.75
	LENGTH			**mm/in**	200 / 7.87
INDOOR FAN MOTOR	**TYPE**				INDUCTION
	QUANTITY				1
	INDEX OF PROTECTION (IP)				N/A
OUTDOOR FAN	**TYPE**				PROPELLER
	QUANTITY				1
	MATERIAL				GLASS REINFORCED ACRYL SYRENE RESIN
	DRIVE				DIRECT
	DIAMETER			**mm/in**	457 / 18
OUTDOOR FAN MOTOR	**TYPE**				INDUCTION
	QUANTITY				1
	INDEX OF PROTECTION (IP)				IP54
COMPRESSOR	**TYPE**				ROTARY
	OIL TYPE				ATMOS NM56M or SUNISO 4GDID
	OIL AMOUNT			**cm^3 / fl.oz.**	700 / 24.6
INDOOR COIL	**TUBE**	**MATERIAL**			SEAMLESS INNER GROOVE COPPER
		DIAMETER		**mm/in**	7.00 / 0.276
		THICKNESS		**mm/in**	0.28 / 0.011
	FIN	**MATERIAL**			ALUMINIUM (SLIT FIN)
		THICKNESS		**mm/in**	0.11 / 0.0043
		FACE AREA		**m^2/ft^2**	0.27 / 2.90
		ROW			3
		FIN PER INCH			18
OUTDOOR COIL	**TUBE**	**MATERIAL**			SEAMLESS INNER GROOVE COPPER
		DIAMETER		**mm/in**	7.00 / 0.276
		THICKNESS		**mm/in**	0.28 / 0.011
	FIN	**MATERIAL**			ALUMINIUM (RAISE LANCE)
		THICKNESS		**mm/in**	0.10 / 0.004
		FACE AREA		**m^2/ft^2**	0.62 / 6.67
		ROW			2
		FIN PER INCH			18
AIR QUALITY	**FILTER**	**TYPE**			WASHABLE SARANET FILTER
		QUANTITY		**pc**	2
		SIZE	**LENGTH**	**mm/in**	309.20 / 12.17
			WIDTH	**mm/in**	383.00 / 15.08
			THICKNESS	**mm/in**	2.25 / 0.09
CASING	**INDOOR UNIT**			**MATERIAL**	PS
				FINISHING	ETCHING SURFACE
				COLOUR	LIGHT GREY
	OUTDOOR UNIT			**MATERIAL**	GALVANISED MILD STEEL
				FINISHING	POLYESTER POWDER
				COLOUR	LIGHT GREY

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COMPONENTS DATA (R22)

MODEL	**INDOOR UNIT**			**ACM 28ER**		
	OUTDOOR UNIT			**ALC 28CR**	**ALC 30CR**	
INDOOR FAN	**TYPE**			CROSS FLOW		
	QUANTITY			2		
	MATERIAL			ABS		
	DRIVE			DIRECT		
	DIAMETER		**mm/in**	146 / 5.75		
	LENGTH		**mm/in**	200 / 7.87		
INDOOR FAN MOTOR	**TYPE**			INDUCTION		
	QUANTITY			1		
	INDEX OF PROTECTION (IP)			N/A		
OUTDOOR FAN	**TYPE**			PROPELLER		
	QUANTITY			1		
	MATERIAL			GLASS REINFORCED ACRYL STYRENE RESIN		
	DRIVE			DIRECT		
	DIAMETER		**mm/in**	457 / 18	609.6 / 24	
OUTDOOR FAN MOTOR	**TYPE**			INDUCTION		
	QUANTITY			1		
	INDEX OF PROTECTION (IP)			IP54	-	
COMPRESSOR	**TYPE**			ROTARY	SCROLL	
	OIL TYPE			ATMOS M60 or SUNISO 4GDID	MINERAL (Sontex 200 LT)	
	OIL AMOUNT		**cm^3 / fl.oz.**	1130 / 39.8	1240 / 43.6	
INDOOR COIL	**TUBE**	**MATERIAL**		SEAMLESS INNER GROOVE COPPER		
		DIAMETER	**mm/in**	7.00 / 0.276		
		THICKNESS	**mm/in**	0.28 / 0.011		
	FIN	**MATERIAL**		ALUMINIUM (SLIT FIN)		
		THICKNESS	**mm/in**	0.11 / 0.0043		
		FACE AREA	**m^2/ft^2**	0.27 / 2.90		
		ROW		3		
		FIN PER INCH		18		
OUTDOOR COIL	**TUBE**	**MATERIAL**		SEAMLESS INNER GROOVE COPPER	SEAMLESS COPPER	
		DIAMETER	**mm/in**	9.52 / 3/8	9.52 / 3/8	
		THICKNESS	**mm/in**	0.33 / 0.013	0.35 / 0.014	
	FIN	**MATERIAL**		ALUMINIUM (SLIT FIN)	ALUMINIUM (CORR. FIN)	
		THICKNESS	**mm/in**	0.12 / 0.005	0.12 / 0.005	
		FACE AREA	**m^2/ft^2**	0.61 / 6.52	0.87 / 9.33	
		ROW		2	2	
		FIN PER INCH		18	16	
AIR QUALITY	**FILTER**	**TYPE**		WASHABLE SARANET		
		QUANTITY	**pc**	2		
		SIZE **LENGTH**	**mm/in**	309.20 / 12.17		
		SIZE **WIDTH**	**mm/in**	383.00 / 15.08		
		SIZE **THICKNESS**	**mm/in**	2.25 / 0.09		
CASING	**INDOOR UNIT**		**MATERIAL**	PS		
			FINISHING	ETCHING SURFACE		
			COLOUR	LIGHT GREY		
	OUTDOOR UNIT		**MATERIAL**	GALVANISED MILD STEEL		
			FINISHING	POLYESTER POWDER		
			COLOUR	LIGHT GREY		

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COMPONENTS DATA (R410A)

MODEL	**INDOOR UNIT**				**A5CM 15E**
	OUTDOOR UNIT				**A5LC 15C**
INDOOR FAN	**TYPE**				CROSS FLOW
	QUANTITY				2
	MATERIAL				ABS
	DRIVE				DIRECT
	DIAMETER			**mm/in**	146 / 5.75
	LENGTH			**mm/in**	200 / 7.87
INDOOR FAN MOTOR	**TYPE**				INDUCTION
	QUANTITY				1
	INDEX OF PROTECTION (IP)				N/A
OUTDOOR FAN	**TYPE**				PROPELLER
	QUANTITY				1
	MATERIAL				GLASS REINFORCED ACRYL STYRENE RESIN
	DRIVE				DIRECT
	DIAMETER			**mm/in**	404 / 16
OUTDOOR FAN MOTOR	**TYPE**				INDUCTION
	QUANTITY				1
	INDEX OF PROTECTION (IP)				IP54
COMPRESSOR	**TYPE**				ROTARY
	OIL TYPE				RB68A or Freol Alpha68M
	OIL AMOUNT			**cm^3 / fl.oz.**	430 / 15.1
INDOOR COIL	**TUBE**	**MATERIAL**			SEAMLESS INNER GROOVE COPPER
		DIAMETER		**mm/in**	7.00 / 0.276
		THICKNESS		**mm/in**	0.28 / 0.011
	FIN	**MATERIAL**			ALUMINIUM (SLIT FIN)
		THICKNESS		**mm/in**	0.11 / 0.0043
		FACE AREA		**m^2/ft^2**	0.26 / 2.90
		ROW			2
		FIN PER INCH			16
OUTDOOR COIL	**TUBE**	**MATERIAL**			SEAMLESS INNER GROOVE COPPER
		DIAMETER		**mm/in**	7.00 / 0.276
		THICKNESS		**mm/in**	0.28 / 0.011
	FIN	**MATERIAL**			ALUMINIUM (RAISE LANCE)
		THICKNESS		**mm/in**	0.10 / 0.004
		FACE AREA		**m^2/ft^2**	0.360 / 3.940
		ROW			1
		FIN PER INCH			20
AIR QUALITY	**FILTER**	**TYPE**			WASHABLE SARANET FILTER
		QUANTITY		**pc**	2
		SIZE	**LENGTH**	**mm/in**	309.20 / 12.17
			WIDTH	**mm/in**	383.00 / 15.08
			THICKNESS	**mm/in**	2.25 / 0.09
CASING	**INDOOR UNIT**			**MATERIAL**	PS
				FINISHING	ETCHING SURFACE
				COLOUR	LIGHT GREY
	OUTDOOR UNIT			**MATERIAL**	GALVANISED MILD STEEL
				FINISHING	POLYESTER POWDER
				COLOUR	LIGHT GREY

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COMPONENTS DATA (R410A)

MODEL	**INDOOR UNIT**				**A5CM 20E**	**A5CM 25E**
	OUTDOOR UNIT				**A5LC 20C**	**A5LC 25C**
INDOOR FAN	**TYPE**				CROSS FLOW	
	QUANTITY				2	
	MATERIAL				ABS	
	DRIVE				DIRECT	
	DIAMETER			**mm/in**	146 / 5.75	
	LENGTH			**mm/in**	200 / 7.87	
INDOOR FAN MOTOR	**TYPE**				INDUCTION	
	QUANTITY				1	
	INDEX OF PROTECTION (IP)				N/A	
OUTDOOR FAN	**TYPE**				PROPELLER	
	QUANTITY				1	
	MATERIAL				GLASS REINFORCED ACRYL STYRENE RESIN	
	DRIVE				DIRECT	
	DIAMETER			**mm/in**	457 / 18	
OUTDOOR FAN MOTOR	**TYPE**				INDUCTION	
	QUANTITY				1	
	INDEX OF PROTECTION (IP)				IP54	
COMPRESSOR	**TYPE**				ROTARY	
	OIL TYPE				RB68A or Freol Alpha68M	
	OIL AMOUNT			**cm^3 / fl.oz.**	670 / 23.6	1130 / 39.8
INDOOR COIL	**TUBE**	**MATERIAL**			SEAMLESS INNER GROOVE COPPER	
		DIAMETER		**mm/in**	7.00 / 0.276	
		THICKNESS		**mm/in**	0.28 / 0.011	
	FIN	**MATERIAL**			ALUMINIUM (SLIT FIN)	
		THICKNESS		**mm/in**	0.11 / 0.0043	
		FACE AREA		**m^2/ft^2**	0.27 / 2.90	
		ROW			3	
		FIN PER INCH			18	
OUTDOOR COIL	**TUBE**	**MATERIAL**			SEAMLESS INNER GROOVE COPPER	
		DIAMETER		**mm/in**	7.00 / 0.276	
		THICKNESS		**mm/in**	0.28 / 0.011	
	FIN	**MATERIAL**			ALUMINIUM (RAISE LANCE)	ALUMINIUM (RAISE LANCE)
		THICKNESS		**mm/in**	0.10 / 0.004	0.10 / 0.004
		FACE AREA		**m^2/ft^2**	0.510 / 5.460	0.620 / 6.630
		ROW			2	2
		FIN PER INCH			18	18
AIR QUALITY	**FILTER**	**TYPE**			WASHABLE SARANET FILTER	
		QUANTITY		**pc**	2	
		SIZE	**LENGTH**	**mm/in**	309.20 / 12.17	
			WIDTH	**mm/in**	383.00 / 15.08	
			THICKNESS	**mm/in**	2.25 / 0.09	
CASING	**INDOOR UNIT**			**MATERIAL**	PS	
				FINISHING	ETCHING SURFACE	
				COLOUR	LIGHT GREY	
	OUTDOOR UNIT			**MATERIAL**	GALVANISED MILD STEEL	
				FINISHING	POLYESTER POWDER	
				COLOUR	LIGHT GREY	

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COMPONENTS DATA (R410A)

MODEL	**INDOOR UNIT**			**A5CM 28E**		
	OUTDOOR UNIT			**A5LC 28C**	**A5LC 35C**	
INDOOR FAN	**TYPE**			CROSS FLOW		
	QUANTITY			2		
	MATERIAL			ABS		
	DRIVE			DIRECT		
	DIAMETER		**mm/in**	146 / 5.75		
	LENGTH		**mm/in**	200 / 7.87		
INDOOR FAN MOTOR	**TYPE**			INDUCTION		
	QUANTITY			1		
	INDEX OF PROTECTION (IP)			N/A		
OUTDOOR FAN	**TYPE**			PROPELLER		
	QUANTITY			1		
	MATERIAL			GLASS REINFORCED ACRYL STYRENE RESIN		
	DRIVE			DIRECT		
	DIAMETER		**mm/in**	457 / 18	609.6 / 24	
OUTDOOR FAN MOTOR	**TYPE**			INDUCTION		
	QUANTITY			1		
	INDEX OF PROTECTION (IP)			IP54	N/A	
COMPRESSOR	**TYPE**			ROTARY	SCROLL	
	OIL TYPE			RB68A or Freol Alpha68M	MOBIL EAL ARCTIC 22CC	
	OIL AMOUNT		**cm^3 / fl.oz.**	1130 / 39.8	1242 / 43.7	
INDOOR COIL	**TUBE**	**MATERIAL**		SEAMLESS INNER GROOVE COPPER		
		DIAMETER	**mm/in**	7.00 / 0.276		
		THICKNESS	**mm/in**	0.28 / 0.011		
	FIN	**MATERIAL**		ALUMINIUM (SLIT FIN)		
		THICKNESS	**mm/in**	0.11 / 0.0043		
		FACE AREA	**m^2/ft^2**	0.27 / 2.90		
		ROW		3		
		FIN PER INCH		18		
OUTDOOR COIL	**TUBE**	**MATERIAL**		SEAMLESS INNER GROOVE COPPER	SEAMLESS COPPER	
		DIAMETER	**mm/in**	7.00 / 0.276	7.00 / 0.276	
		THICKNESS	**mm/in**	0.28 / 0.011	0.28 / 0.011	
	FIN	**MATERIAL**		ALUMINIUM (CORR. FIN)	ALUMINIUM (CORR. FIN)	
		THICKNESS	**mm/in**	0.11 / 0.0043	0.11 / 0.0043	
		FACE AREA	**m^2/ft^2**	0.620 / 6.630	0.87 / 9.33	
		ROW		2	2	
		FIN PER INCH		18	18	
AIR QUALITY	**FILTER**	**TYPE**		WASHABLE SARANET FILTER		
		QUANTITY	**pc**	2		
		SIZE **LENGTH**	**mm/in**	309.20 / 12.17		
		SIZE **WIDTH**	**mm/in**	383.00 / 15.08		
		SIZE **THICKNESS**	**mm/in**	2.25 / 0.09		
CASING	**INDOOR UNIT**		**MATERIAL**	PS		
			FINISHING	ETCHING SURFACE		
			COLOUR	LIGHT GREY		
	OUTDOOR UNIT		**MATERIAL**	GALVANISED MILD STEEL		
			FINISHING	POLYESTER POWDER		
			COLOUR	LIGHT GREY		

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COMPONENTS DATA (R410A)

MODEL	**INDOOR UNIT**				**A5CM 15ER**
	OUTDOOR UNIT				**A5LC 15CR**
INDOOR FAN	**TYPE**				CROSS FLOW
	QUANTITY				2
	MATERIAL				ABS
	DRIVE				DIRECT
	DIAMETER			**mm/in**	146 / 5.75
	LENGTH			**mm/in**	200 / 7.87
INDOOR FAN MOTOR	**TYPE**				INDUCTION
	QUANTITY				1
	INDEX OF PROTECTION (IP)				N/A
OUTDOOR FAN	**TYPE**				PROPELLER
	QUANTITY				1
	MATERIAL				GLASS REINFORCED ACRYL STYRENE RESIN
	DRIVE				DIRECT
	DIAMETER			**mm/in**	404 / 16
OUTDOOR FAN MOTOR	**TYPE**				INDUCTION
	QUANTITY				1
	INDEX OF PROTECTION (IP)				IP54
COMPRESSOR	**TYPE**				ROTARY
	OIL TYPE				RB68A or Freol Alpha68M
	OIL AMOUNT			**cm^3 / fl.oz.**	430 / 15.1
INDOOR COIL	**TUBE**	**MATERIAL**			SEAMLESS INNER GROOVE COPPER
		DIAMETER		**mm/in**	7.00 / 0.276
		THICKNESS		**mm/in**	0.28 / 0.011
	FIN	**MATERIAL**			ALUMINIUM (SLIT FIN)
		THICKNESS		**mm/in**	0.11 / 0.0043
		FACE AREA		**m^2/ft^2**	0.26 / 2.90
		ROW			2
		FIN PER INCH			16
OUTDOOR COIL	**TUBE**	**MATERIAL**			SEAMLESS INNER GROOVE COPPER
		DIAMETER		**mm/in**	7.00 / 0.276
		THICKNESS		**mm/in**	0.28 / 0.011
	FIN	**MATERIAL**			ALUMINIUM (RAISE LANCE)
		THICKNESS		**mm/in**	0.10 / 0.004
		FACE AREA		**m^2/ft^2**	0.360 / 3.940
		ROW			1
		FIN PER INCH			20
AIR QUALITY	**FILTER**	**TYPE**			WASHABLE SARANET FILTER
		QUANTITY		**pc**	2
		SIZE	**LENGTH**	**mm/in**	309.20 / 12.17
			WIDTH	**mm/in**	383.00 / 15.08
			THICKNESS	**mm/in**	2.25 / 0.09
CASING	**INDOOR UNIT**			**MATERIAL**	PS
				FINISHING	ETCHING SURFACE
				COLOUR	LIGHT GREY
	OUTDOOR UNIT			**MATERIAL**	GALVANISED MILD STEEL
				FINISHING	POLYESTER POWDER
				COLOUR	LIGHT GREY

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COMPONENTS DATA (R410A)

MODEL	INDOOR UNIT			A5CM 20ER	A5CM 25ER
	OUTDOOR UNIT			A5LC 20CR	A5LC 25CR
INDOOR FAN	TYPE			CROSS FLOW	
	QUANTITY			2	
	MATERIAL			ABS	
	DRIVE			DIRECT	
	DIAMETER		mm/in	146 / 5.75	
	LENGTH		mm/in	200 / 7.87	
INDOOR FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	
	INDEX OF PROTECTION (IP)			N/A	
OUTDOOR FAN	TYPE			PROPELLER	
	QUANTITY			1	
	MATERIAL			GLASS REINFORCED ACRYL SYRENE RESIN	
	DRIVE			DIRECT	
	DIAMETER		mm/in	457 / 18	
OUTDOOR FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	
	INDEX OF PROTECTION (IP)			IP54	
COMPRESSOR	TYPE			ROTARY	
	OIL TYPE			RB68A or Freol Alpha68M	
	OIL AMOUNT		cm^3 / fl.oz.	670 / 23.6	1130 / 39.8
INDOOR COIL	TUBE	MATERIAL		SEAMLESS INNER GROOVE COPPER	
		DIAMETER	mm/in	7.00 / 0.276	
		THICKNESS	mm/in	0.28 / 0.011	
	FIN	MATERIAL		ALUMINIUM (SLIT FIN)	
		THICKNESS	mm/in	0.11 / 0.0043	
		FACE AREA	m^2/ft^2	0.27 / 2.90	
		ROW		3	
		FIN PER INCH		18	
OUTDOOR COIL	TUBE	MATERIAL		SEAMLESS INNER GROOVE COPPER	
		DIAMETER	mm/in	7.00 / 0.276	
		THICKNESS	mm/in	0.28 / 0.011	
	FIN	MATERIAL		ALUMINIUM (RAISE LANCE)	ALUMINIUM (RAISE LANCE)
		THICKNESS	mm/in	0.10 / 0.004	0.10 / 0.004
		FACE AREA	m^2/ft^2	0.510 / 5.460	0.620 / 6.630
		ROW		2	2
		FIN PER INCH		18	18
AIR QUALITY	FILTER	TYPE		WASHABLE SARANET FILTER	
		QUANTITY	pc	2	
		SIZE LENGTH	mm/in	309.20 / 12.17	
		SIZE WIDTH	mm/in	383.00 / 15.08	
		SIZE THICKNESS	mm/in	2.25 / 0.09	
CASING	INDOOR UNIT		MATERIAL	PS	
			FINISHING	ETCHING SURFACE	
			COLOUR	LIGHT GREY	
	OUTDOOR UNIT		MATERIAL	GALVANISED MILD STEEL	
			FINISHING	POLYESTER POWDER	
			COLOUR	LIGHT GREY	

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COMPONENTS DATA (R410A)

MODEL	INDOOR UNIT			A5CM 28ER	
	OUTDOOR UNIT			A5LC 28CR	A5LC 35CR
INDOOR FAN	TYPE			CROSS FLOW	
	Q'TY			2	
	MATERIAL			ABS	
	DRIVE			DIRECT	
	DIAMETER		mm/in	146 / 5.75	
	LENGTH		mm/in	200 / 7.87	
INDOOR FAN MOTOR	TYPE			INDUCTION	
	Q'TY			1	
	INDEX OF PROTECTION (IP)			N/A	
OUTDOOR FAN	TYPE			PROPELLER	
	Q'TY			1	
	MATERIAL			GLASS REINFORCED ACRYL STYRENE RESIN	
	DRIVE			DIRECT	
	DIAMETER		mm/in	457 / 18	609.6 / 24
OUTDOOR FAN MOTOR	TYPE			INDUCTION	
	Q'TY			1	
	INDEX OF PROTECTION (IP)			IP54	-
COMPRESSOR	TYPE			ROTARY	SCROLL
	OIL TYPE			RB68A or Freol Alpha68M	MOBIL EAL ARCTIC 22CC
	OIL AMOUNT		cm^3 / fl.oz.	1130 / 39.8	1242 / 43.7
INDOOR COIL	TUBE	MATERIAL		SEAMLESS INNER GROOVE COPPER	
		DIAMETER	mm/in	7.00 / 0.276	
		THICKNESS	mm/in	0.28 / 0.011	
	FIN	MATERIAL		ALUMINIUM (SLIT FIN)	
		THICKNESS	mm/in	0.11 / 0.0043	
		FACE AREA	m^2/ft^2	0.27 / 2.90	
		ROW		3	
		FIN PER INCH		18	
OUTDOOR COIL	TUBE	MATERIAL		SEAMLESS INNER GROOVE COPPER	SEAMLESS COPPER
		DIAMETER	mm/in	7.00 / 0.276	7.00 / 0.276
		THICKNESS	mm/in	0.28 / 0.011	0.28 / 0.011
	FIN	MATERIAL		ALUMINIUM (CORR. FIN)	ALUMINIUM (CORR. FIN)
		THICKNESS	mm/in	0.11 / 0.0043	0.11 / 0.0043
		FACE AREA	m^2/ft^2	0.620 / 6.630	0.87 / 9.33
		ROW		2	2
		FIN PER INCH		18	18
AIR QUALITY	FILTER	TYPE		WASHABLE SARANET FILTER	
		QUANTITY	pc	2	
		SIZE LENGTH	mm/in	309.20 / 12.17	
		SIZE WIDTH	mm/in	383.00 / 15.08	
		SIZE THICKNESS	mm/in	2.25 / 0.09	
CASING	INDOOR UNIT		MATERIAL	PS	
			FINISHING	ETCHING SURFACE	
			COLOUR	LIGHT GREY	
	OUTDOOR UNIT		MATERIAL	GALVANISED MILD STEEL	
			FINISHING	POLYESTER POWDER	
			COLOUR	LIGHT GREY	

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SAFETY DEVICES

MODEL	INDOOR UNIT			ACM 15E
	OUTDOOR UNIT			ALC 15C
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	LOW PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	PHASE SEQUENCER			N/A
	DISCHARGE THERMOSTAT SETTING		°C / °F	N/A

MODEL	INDOOR UNIT			ACM 20E	
	OUTDOOR UNIT			ALC 18C	ALC 20C
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		N/A	
		OPEN	kPa / psi	N/A	
		CLOSE	kPa / psi	N/A	
	LOW PRESSURE SWITCH	TYPE		N/A	
		OPEN	kPa / psi	N/A	
		CLOSE	kPa / psi	N/A	
	PHASE SEQUENCER			N/A	
	DISCHARGE THERMOSTAT SETTING		°C / °F	N/A	

MODEL	INDOOR UNIT			ACM 25E
	OUTDOOR UNIT			ALC 25C
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	LOW PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	PHASE SEQUENCER			N/A
	DISCHARGE THERMOSTAT SETTING		°C / °F	N/A

MODEL	INDOOR UNIT			ACM 28E	
	OUTDOOR UNIT			ALC 28C	ALC 30C
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		N/A	NC
		OPEN	kPa / psi	N/A	2937 / 426
		CLOSE	kPa / psi	N/A	2413 / 350
	LOW PRESSURE SWITCH	TYPE		N/A	NC
		OPEN	kPa / psi	N/A	124 / 18
		CLOSE	kPa / psi	N/A	193 / 28
	PHASE SEQUENCER - 1Ø / <3Ø>			N/A	N/A / <YES>
	DISCHARGE THERMOSTAT SETTING - 1Ø / <3Ø>		°C / °F	N/A	N/A / <130 / 266>

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SAFETY DEVICES

MODEL	INDOOR UNIT			ACM 15ER
	OUTDOOR UNIT			ALC 15CR
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	LOW PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	PHASE SEQUENCER			N/A
	DISCHARGE THERMOSTAT SETTING		°C / °F	N/A

MODEL	INDOOR UNIT			ACM 20ER	
	OUTDOOR UNIT			ALC 18CR	ALC 20CR
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		N/A	
		OPEN	kPa / psi	N/A	
		CLOSE	kPa / psi	N/A	
	LOW PRESSURE SWITCH	TYPE		N/A	
		OPEN	kPa / psi	N/A	
		CLOSE	kPa / psi	N/A	
	PHASE SEQUENCER			N/A	
	DISCHARGE THERMOSTAT SETTING		°C / °F	N/A	

MODEL	INDOOR UNIT			ACM 25ER
	OUTDOOR UNIT			ALC 25CR
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	LOW PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	PHASE SEQUENCER			N/A
	DISCHARGE THERMOSTAT SETTING		°C / °F	N/A

MODEL	INDOOR UNIT			ACM 28ER	
	OUTDOOR UNIT			ALC 28CR	ALC 30CR
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		N/A	NC
		OPEN	kPa / psi	N/A	2937 / 426
		CLOSE	kPa / psi	N/A	2413 / 350
	LOW PRESSURE SWITCH	TYPE		N/A	N/A
		OPEN	kPa / psi	N/A	N/A
		CLOSE	kPa / psi	N/A	N/A
	PHASE SEQUENCER - 1Ø / <3Ø>			N/A	N/A / <YES>
	DISCHARGE THERMOSTAT SETTING - 1Ø / <3Ø>		°C / °F	N/A	N/A / <130 / 266>

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SAFETY DEVICES

MODEL	INDOOR UNIT			A5CM 15E
	OUTDOOR UNIT			A5LC 15C
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	LOW PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	PHASE SEQUENCER			N/A
	DISCHARGE THERMOSTAT SETTING		°C / °F	N/A

MODEL	INDOOR UNIT			A5CM 20E
	OUTDOOR UNIT			A5LC 20C
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	LOW PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	PHASE SEQUENCER - 1Ø / <3Ø>			N/A / <YES>
	DISCHARGE THERMOSTAT SETTING - 1Ø / <3Ø>		°C / °F	N/A / <130 / 266>

MODEL	INDOOR UNIT			A5CM 25E
	OUTDOOR UNIT			A5LC 25C
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	LOW PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	PHASE SEQUENCER - 1Ø / <3Ø>			N/A / <YES>
	DISCHARGE THERMOSTAT SETTING - 1Ø / <3Ø>		°C / °F	N/A / <130 / 266>

MODEL	INDOOR UNIT			A5CM 28E	
	OUTDOOR UNIT			A5LC 28C	A5LC 35C
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		N/A	NC
		OPEN	kPa / psi	N/A	4140 / 600
		CLOSE	kPa / psi	N/A	3312 / 480
	LOW PRESSURE SWITCH	TYPE		N/A	NC
		OPEN	kPa / psi	N/A	48 / 7
		CLOSE	kPa / psi	N/A	152 / 22
	PHASE SEQUENCER - 1Ø / <3Ø>			N/A / <YES>	N/A / <YES>
	DISCHARGE THERMOSTAT SETTING - 1Ø / <3Ø>		°C / °F	N/A / <130 / 266>	N/A / <130 / 266>

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SAFETY DEVICES

MODEL	INDOOR UNIT			A5CM 15ER
	OUTDOOR UNIT			A5LC 15CR
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	LOW PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	PHASE SEQUENCER			N/A
	DISCHARGE THERMOSTAT SETTING		°C / °F	N/A

MODEL	INDOOR UNIT			A5CM 20ER
	OUTDOOR UNIT			A5LC 20CR
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	LOW PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	PHASE SEQUENCER - 1Ø / <3Ø>			N/A / <YES>
	DISCHARGE THERMOSTAT SETTING - 1Ø / <3Ø>		°C / °F	N/A / <130 / 266>

MODEL	INDOOR UNIT			A5CM 25ER
	OUTDOOR UNIT			A5LC 25CR
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	LOW PRESSURE SWITCH	TYPE		N/A
		OPEN	kPa / psi	N/A
		CLOSE	kPa / psi	N/A
	PHASE SEQUENCER - 1Ø / <3Ø>			N/A / <YES>
	DISCHARGE THERMOSTAT SETTING - 1Ø / <3Ø>		°C / °F	N/A / <130 / 266>

MODEL	INDOOR UNIT			A5CM 28ER	
	OUTDOOR UNIT			A5LC 28CR	A5LC 35CR
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		N/A	NC
		OPEN	kPa / psi	N/A	4140 / 600
		CLOSE	kPa / psi	N/A	3312 / 480
	LOW PRESSURE SWITCH	TYPE		N/A	NC
		OPEN	kPa / psi	N/A	48 / 7
		CLOSE	kPa / psi	N/A	152 / 22
	PHASE SEQUENCER - 1Ø / <3Ø>			N/A / <YES>	N/A / <YES>
	DISCHARGE THERMOSTAT SETTING - 1Ø / <3Ø>		°C / °F	N/A / <130 / 266>	N/A / <130 / 266>

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6. PERFORMANCE DATA

Interpolation and *Extrapolation* method can be used to get the total capacity, Q and sensible capacity, SC at those temperatures which are not stated out in the table.

Example:

Model: ACM 15E / ALC 15C
Indoor Condition: 23°C DB, 15°C WB
Outdoor Condition: 37°C DB

Solution:

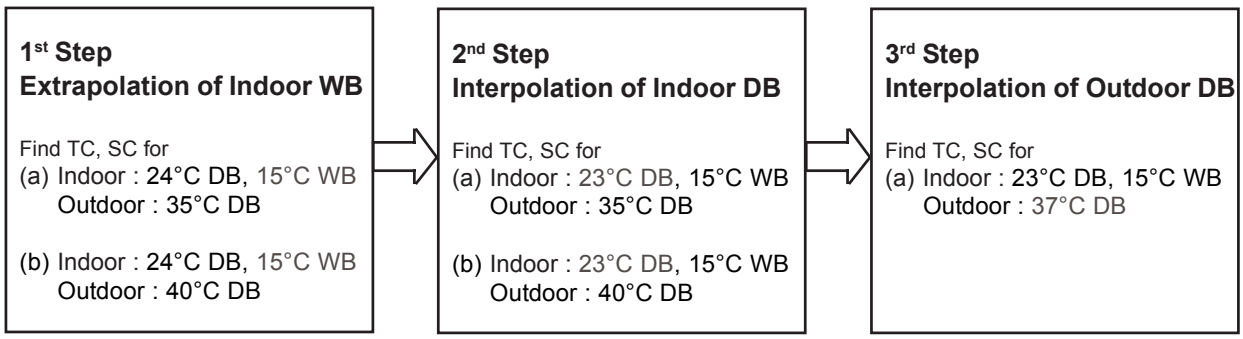
Overall
Based on the Performance table in page 67,

1. Refer to the Indoor DB column,
   - **23°C** is located between 20°C and 24°C (Thus, Interpolation need to be applied)

2. Refer to the Indoor WB column,
   - **15°C** only available in the case of Indoor DB = 20°C. (Thus, Extrapolation between 16°C WB and 17°C WB during 24°C indoor DB is required)

3. Refer to the Outdoor DB column,
   - **37°C** is located between 35°C and 40°C. (Thus, Interpolation need to be applied)

Please follow the steps below in order to get the required capacity.


1st Step
Extrapolation of Indoor WB
Find TC, SC for
(a) Indoor : 24°C DB, 15°C WB
Outdoor : 35°C DB
(b) Indoor : 24°C DB, 15°C WB
Outdoor : 40°C DB
2nd Step
Interpolation of Indoor DB
Find TC, SC for
(a) Indoor : 23°C DB, 15°C WB
Outdoor : 35°C DB
(b) Indoor : 23°C DB, 15°C WB
Outdoor : 40°C DB
3rd Step
Interpolation of Outdoor DB
Find TC, SC for
(a) Indoor : 23°C DB, 15°C WB
Outdoor : 37°C DB

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Details:

1st Step:

To obtain the Total capacity and Sensible capacity for

(a) Indoor Condition: 24°C DB, 15°C WB

Outdoor Condition: 35°C DB

Indoor DB ° C	Indoor WB ° C	Outdoor DB ° C			
			35		
			TC (kW)	SC (kW)	
24	15		x_1	y_1	
	16		3.363	2.381	
	17		3.431	2.288	

Total capacity, TC

$\Rightarrow$ x_1 = 3.295kW *(Same as Total capacity at 20°C Indoor DB / 15°C Indoor WB & 35°C Outdoor WB)**

Sensible capacity, SC

Extrapolation Method:

$$\Rightarrow \frac{17°C - 15°C}{17°C - 16°C} = \frac{2.288kW - y_1}{2.288kW - 2.381kW}$$

$\Rightarrow$ y_1 = 2.474kW

(b) Indoor Condition: 24°C DB, 15°C WB

Outdoor Condition: 40°C DB

Indoor DB ° C	Indoor WB ° C	Outdoor DB ° C			
			40		
			TC (kW)	SC (kW)	
24	15		x_2	y_2	
	16		3.066	2.056	
	17		3.137	1.954	

Total capacity, TC

$\Rightarrow$ x_2 = 2.995kW *(Same as Total capacity at 20°C Indoor DB / 15°C Indoor WB & 40°C Outdoor WB)**

Sensible capacity, SC

Extrapolation Method:

$$\Rightarrow \frac{17°C - 15°C}{17°C - 16°C} = \frac{1.954kW - y_2}{1.954kW - 2.056kW}$$

$\Rightarrow$ y_2 = 2.158kW

** This is due to 2 different conditions with same WB temperature, will have the same level of enthalpy. For more details, please refer to psychrometrics chart*

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2nd Step:

To obtain the Total capacity and Sensible capacity for

(a) Indoor Condition: 23°C DB, 15°C WB
Outdoor Condition: 35°C DB

Indoor DB ° C	Indoor WB ° C	Outdoor DB ° C			
			35		
			TC (kW)	SC (kW)	
20	**15**		3.295	1.510	
23	**15**		x_3	y_3	
24	**15**		3.295	2.474	

Total capacity, TC

$\Rightarrow$ x_3 = 3.295kW *(Same as Total capacity at 20°C Indoor DB / 15°C Indoor WB & 35°C Outdoor WB)**

Sensible capacity, SC

Interpolation Method:

$$\Rightarrow \frac{24°C - 20°C}{24°C - 23°C} = \frac{2.474kW - 1.510kW}{2.474kW - y_3}$$

$\Rightarrow$ y_3 = 2.233kW

(b) Indoor Condition: 23°C DB, 15°C WB

Outdoor Condition: 40°C DB

Indoor DB ° C	Indoor WB ° C	Outdoor DB ° C			
			40		
			TC (kW)	SC (kW)	
20	**15**		2.995	1.195	
23	**15**		x_4	y_4	
24	**15**		2.995	2.158	

Total capacity, TC

$\Rightarrow$ x_4 = 2.995kW *(Same as Total capacity at 20°C Indoor DB / 15°C Indoor WB & 40°C Outdoor WB)**

Sensible capacity, SC

Interpolation Method:

$$\Rightarrow \frac{24°C - 20°C}{24°C - 23°C} = \frac{2.158kW - 1.195kW}{2.158kW - y_4}$$

$\Rightarrow$ y_4 = 1.917kW

** This is due to 2 different conditions with same WB temperature will have the same level of enthalpy. For more details, please refer to psychrometrics chart*

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3rd Step:

To obtain the Total capacity and Sensible capacity for

(a) Indoor Condition: 23°C DB, 15°C WB

Outdoor Condition: 37°C DB

Indoor DB ° C	Indoor WB ° C	Outdoor DB ° C						
			35		37		40	
			TC (kW)	SC (kW)	TC (kW)	SC (kW)	TC (kW)	SC (kW)
23	**15**	- - - - -	3.295	2.233	**x**	**y**	2.995	1.917

Total capacity, TC

Interpolation Method:

$$\Rightarrow \frac{40°C - 35°C}{40°C - 37°C} = \frac{2.995kW - 3.295kW}{2.995kW - x}$$

$$\Rightarrow x = 3.175kW$$

Sensible capacity, SC

Interpolation Method:

$$\Rightarrow \frac{40°C - 35°C}{40°C - 37°C} = \frac{1.917kW - 2.233kW}{1.917kW - y}$$

$$\Rightarrow y = 2.107kW$$

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Performance Tables

R22 MODELS
(COOLING ONLY)

MODEL : ACM 15E / ALC 15C

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	4.198	2.455	3.897	2.140	3.596	1.825	3.295	1.510	2.995	1.195	2.634	0.816
	16	4.255	2.390	3.958	2.065	3.660	1.741	3.363	1.417	3.066	1.093	2.709	0.704
24	16	4.255	3.353	3.958	3.029	3.660	2.705	3.363	2.381	3.066	2.056	2.709	1.667
	17	4.313	3.288	4.019	2.955	3.725	2.621	3.431	2.288	3.137	1.954	2.784	1.554
	18	4.370	3.224	4.080	2.881	3.789	2.538	3.498	2.195	3.208	1.853	2.859	1.441
	19	4.428	3.159	4.140	2.807	3.853	2.455	3.566	2.103	3.279	1.751	2.934	1.328
	20	4.486	3.095	4.207	2.744	3.928	2.393	3.649	2.042	3.370	1.691	3.036	1.270
28	18	4.370	4.187	4.080	3.844	3.789	3.502	3.498	3.159	3.208	2.816	2.859	2.405
	19	4.428	4.122	4.140	3.770	3.853	3.418	3.566	3.066	3.279	2.714	2.934	2.292
	20	4.486	4.059	4.207	3.708	3.928	3.357	3.649	3.006	3.370	2.655	3.036	2.234
	21	4.544	3.996	4.277	3.653	4.010	3.310	3.742	2.967	3.475	2.624	3.154	2.213
	22	4.603	3.933	4.347	3.598	4.091	3.263	3.836	2.928	3.580	2.593	3.273	2.192
	23	4.661	3.870	4.417	3.543	4.173	3.216	3.929	2.890	3.685	2.563	3.392	2.170
	24	4.720	3.807	4.487	3.489	4.255	3.170	4.022	2.851	3.790	2.532	3.511	2.149
30	20	4.540	4.540	4.207	4.190	3.928	3.839	3.649	3.488	3.370	3.137	3.036	2.716
	21	4.544	4.478	4.277	4.135	4.010	3.792	3.742	3.449	3.475	3.106	3.154	2.695
	22	4.603	4.415	4.347	4.080	4.091	3.745	3.836	3.410	3.580	3.075	3.273	2.673
	23	4.661	4.352	4.417	4.025	4.173	3.698	3.929	3.371	3.685	3.044	3.392	2.652
	24	4.720	4.289	4.487	3.970	4.255	3.651	4.022	3.333	3.790	3.014	3.511	2.631

MODEL : ACM 20E / ALC 18C

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	5.742	3.706	5.396	3.412	5.049	3.117	4.702	2.822	4.355	2.528	3.939	2.174
	16	5.967	3.456	5.597	3.186	5.227	2.916	4.857	2.646	4.487	2.376	4.043	2.052
24	16	5.967	4.367	5.597	4.097	5.227	3.827	4.857	3.557	4.487	3.287	4.043	2.963
	17	6.192	4.116	5.799	3.871	5.406	3.626	5.013	3.381	4.620	3.136	4.148	2.842
	18	6.417	3.866	6.001	3.645	5.585	3.425	5.168	3.205	4.752	2.985	4.252	2.720
	19	6.643	3.615	6.203	3.420	5.763	3.224	5.324	3.029	4.884	2.833	4.357	2.599
	20	6.869	3.364	6.415	3.189	5.962	3.013	5.509	2.838	5.055	2.663	4.511	2.453
28	18	6.417	4.776	6.001	4.556	5.585	4.336	5.168	4.116	4.752	3.895	4.252	3.631
	19	6.643	4.526	6.203	4.330	5.763	4.135	5.324	3.940	4.884	3.744	4.357	3.510
	20	6.869	4.275	6.415	4.099	5.962	3.924	5.509	3.749	5.055	3.574	4.511	3.363
	21	7.096	4.023	6.635	3.865	6.174	3.707	5.713	3.549	5.252	3.390	4.699	3.200
	22	7.323	3.772	6.854	3.631	6.386	3.489	5.917	3.348	5.449	3.207	4.887	3.037
	23	7.549	3.520	7.073	3.396	6.598	3.272	6.122	3.148	5.646	3.023	5.074	2.874
	24	7.776	3.269	7.293	3.162	6.809	3.055	6.326	2.947	5.842	2.840	5.262	2.711
30	20	6.869	4.730	6.415	4.555	5.962	4.380	5.509	4.204	5.055	4.029	4.511	3.819
	21	7.096	4.479	6.635	4.320	6.174	4.162	5.713	4.004	5.252	3.846	4.699	3.656
	22	7.323	4.227	6.854	4.086	6.386	3.945	5.917	3.803	5.449	3.662	4.887	3.493
	23	7.549	3.976	7.073	3.852	6.598	3.727	6.122	3.603	5.646	3.479	5.074	3.330
	24	7.776	3.724	7.293	3.617	6.809	3.510	6.326	3.403	5.842	3.295	5.262	3.167

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R22 MODELS
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MODEL : ACM 20E / ALC 20C

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	5.850	3.645	5.531	3.384	5.213	3.123	4.894	2.862	4.575	2.602	4.193	2.288
	16	6.081	3.339	5.746	3.114	5.410	2.889	5.074	2.664	4.738	2.439	4.335	2.169
24	16	6.081	4.310	5.746	4.085	5.410	3.860	5.074	3.635	4.738	3.410	4.335	3.140
	17	6.313	4.004	5.960	3.814	5.607	3.625	5.254	3.436	4.900	3.247	4.477	3.020
	18	6.544	3.697	6.174	3.544	5.804	3.391	5.433	3.238	5.063	3.085	4.619	2.901
	19	6.776	3.391	6.388	3.274	6.001	3.157	5.613	3.039	5.226	2.922	4.761	2.781
	20	7.008	3.084	6.605	2.993	6.202	2.902	5.800	2.811	5.397	2.720	4.914	2.610
28	18	6.544	4.668	6.174	4.515	5.804	4.362	5.433	4.209	5.063	4.055	4.619	3.872
	19	6.776	4.362	6.388	4.245	6.001	4.127	5.613	4.010	5.226	3.893	4.761	3.752
	20	7.008	4.054	6.605	3.963	6.202	3.872	5.800	3.781	5.397	3.690	4.914	3.581
	21	7.240	3.746	6.823	3.675	6.407	3.604	5.990	3.532	5.574	3.461	5.074	3.376
	22	7.472	3.438	7.041	3.386	6.611	3.335	6.181	3.284	5.750	3.232	5.234	3.170
	23	7.703	3.130	7.259	3.098	6.815	3.066	6.371	3.035	5.927	3.003	5.394	2.965
	24	7.935	2.822	7.477	2.810	7.020	2.798	6.562	2.786	6.104	2.774	5.554	2.759
30	20	7.008	4.540	6.605	4.449	6.202	4.358	5.800	4.267	5.397	4.176	4.914	4.067
	21	7.240	4.232	6.823	4.160	6.407	4.089	5.990	4.018	5.574	3.947	5.074	3.861
	22	7.472	3.923	7.041	3.872	6.611	3.820	6.181	3.769	5.750	3.717	5.234	3.656
	23	7.703	3.615	7.259	3.583	6.815	3.552	6.371	3.520	5.927	3.488	5.394	3.450
	24	7.935	3.307	7.477	3.295	7.020	3.283	6.562	3.271	6.104	3.259	5.554	3.245

MODEL : ACM 25E / ALC 25C

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	7.548	5.116	7.125	4.731	6.702	4.345	6.278	3.960	5.855	3.574	5.347	3.112
	16	7.724	4.701	7.311	4.360	6.897	4.019	6.484	3.678	6.070	3.336	5.573	2.927
24	16	7.724	5.768	7.311	5.427	6.897	5.086	6.484	4.745	6.070	4.404	5.573	3.994
	17	7.900	5.353	7.497	5.056	7.093	4.759	6.689	4.462	6.285	4.166	5.800	3.810
	18	8.077	4.937	7.682	4.685	7.288	4.433	6.894	4.180	6.499	3.928	6.026	3.625
	19	8.253	4.522	7.868	4.314	7.483	4.106	7.099	3.898	6.714	3.690	6.252	3.441
	20	8.428	4.106	8.044	3.938	7.660	3.769	7.275	3.601	6.891	3.433	6.431	3.231
28	18	8.077	6.004	7.682	5.752	7.288	5.500	6.894	5.247	6.499	4.995	6.026	4.692
	19	8.253	5.589	7.868	5.381	7.483	5.173	7.099	4.965	6.714	4.757	6.252	4.508
	20	8.428	5.173	8.044	5.005	7.660	4.837	7.275	4.668	6.891	4.500	6.431	4.298
	21	8.602	4.757	8.212	4.625	7.823	4.493	7.434	4.362	7.044	4.230	6.577	4.072
	22	8.776	4.340	8.381	4.245	7.986	4.150	7.592	4.055	7.197	3.960	6.723	3.845
	23	8.950	3.924	8.550	3.865	8.150	3.807	7.750	3.748	7.350	3.689	6.869	3.619
	24	9.125	3.508	8.719	3.486	8.313	3.463	7.908	3.441	7.502	3.419	7.015	3.393
30	20	8.428	5.707	8.044	5.538	7.660	5.370	7.275	5.202	6.891	5.034	6.431	4.832
	21	8.602	5.290	8.212	5.159	7.823	5.027	7.434	4.895	7.044	4.763	6.577	4.605
	22	8.776	4.874	8.381	4.779	7.986	4.684	7.592	4.588	7.197	4.493	6.723	4.379
	23	8.950	4.458	8.550	4.399	8.150	4.340	7.750	4.282	7.350	4.223	6.869	4.153
	24	9.125	4.041	8.719	4.019	8.313	3.997	7.908	3.975	7.502	3.953	7.015	3.926

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R22 MODELS
(COOLING ONLY)

MODEL : ACM 28E / ALC 28C

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	8.627	5.602	8.148	5.215	7.669	4.828	7.190	4.441	6.711	4.054	6.136	3.589
	16	9.034	5.190	8.509	4.841	7.985	4.492	7.460	4.142	6.935	3.793	6.306	3.374
24	16	9.034	6.458	8.509	6.109	7.985	5.760	7.460	5.410	6.935	5.061	6.306	4.642
	17	9.442	6.047	8.871	5.735	8.301	5.423	7.730	5.112	7.160	4.800	6.475	4.426
	18	9.849	5.635	9.233	5.361	8.617	5.087	8.001	4.813	7.385	4.540	6.645	4.211
	19	10.256	5.223	9.595	4.987	8.933	4.751	8.271	4.515	7.609	4.279	6.815	3.996
	20	10.665	4.811	9.971	4.607	9.276	4.403	8.581	4.200	7.887	3.996	7.053	3.751
28	18	9.849	6.903	9.233	6.629	8.617	6.355	8.001	6.081	7.385	5.807	6.645	5.479
	19	10.256	6.491	9.595	6.255	8.933	6.019	8.271	5.783	7.609	5.547	6.815	5.264
	20	10.665	6.078	9.971	5.875	9.276	5.671	8.581	5.467	7.887	5.264	7.053	5.019
	21	11.075	5.666	10.356	5.491	9.637	5.315	8.918	5.140	8.199	4.965	7.336	4.755
	22	11.485	5.253	10.742	5.106	9.999	4.960	9.255	4.813	8.512	4.667	7.620	4.491
	23	11.895	4.840	11.128	4.722	10.360	4.604	9.592	4.486	8.824	4.368	7.903	4.226
	24	12.305	4.427	11.513	4.338	10.721	4.248	9.929	4.159	9.137	4.069	8.186	3.962
30	20	10.665	6.712	9.971	6.509	9.276	6.305	8.581	6.101	7.887	5.897	7.053	5.653
	21	11.075	6.300	10.356	6.124	9.637	5.949	8.918	5.774	8.199	5.599	7.336	5.389
	22	11.485	5.887	10.742	5.740	9.999	5.594	9.255	5.447	8.512	5.300	7.620	5.124
	23	11.895	5.474	11.128	5.356	10.360	5.238	9.592	5.120	8.824	5.002	7.903	4.860
	24	12.305	5.061	11.513	4.972	10.721	4.882	9.929	4.793	9.137	4.703	8.186	4.596

MODEL : ACM 28E / ALC 30C

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	8.897	5.879	8.367	5.441	7.837	5.003	7.307	4.564	6.778	4.126	6.142	3.600
	16	9.245	5.407	8.681	5.018	8.117	4.629	7.553	4.240	6.989	3.851	6.312	3.385
24	16	9.245	6.675	8.681	6.286	8.117	5.897	7.553	5.508	6.989	5.119	6.312	4.653
	17	9.594	6.203	8.995	5.863	8.397	5.524	7.798	5.184	7.200	4.844	6.482	4.437
	18	9.942	5.731	9.309	5.441	8.677	5.150	8.044	4.860	7.411	4.570	6.652	4.221
	19	10.290	5.259	9.623	5.018	8.956	4.777	8.289	4.536	7.622	4.295	6.822	4.006
	20	10.640	4.786	9.952	4.589	9.263	4.392	8.575	4.195	7.886	3.997	7.060	3.761
28	18	9.942	6.999	9.309	6.708	8.677	6.418	8.044	6.128	7.411	5.837	6.652	5.489
	19	10.290	6.527	9.623	6.286	8.956	6.045	8.289	5.804	7.622	5.563	6.822	5.273
	20	10.640	6.054	9.952	5.857	9.263	5.660	8.575	5.462	7.886	5.265	7.060	5.028
	21	10.992	5.581	10.290	5.424	9.588	5.267	8.887	5.109	8.185	4.952	7.344	4.764
	22	11.343	5.108	10.628	4.991	9.914	4.874	9.199	4.757	8.485	4.639	7.627	4.499
	23	11.694	4.635	10.966	4.558	10.239	4.481	9.511	4.404	8.784	4.326	7.911	4.234
	24	12.045	4.162	11.304	4.125	10.564	4.088	9.823	4.051	9.083	4.014	8.195	3.969
30	20	10.640	6.688	9.952	6.491	9.263	6.293	8.575	6.096	7.886	5.899	7.060	5.662
	21	10.992	6.215	10.290	6.058	9.588	5.901	8.887	5.743	8.185	5.586	7.344	5.397
	22	11.343	5.742	10.628	5.625	9.914	5.508	9.199	5.390	8.485	5.273	7.627	5.133
	23	11.694	5.269	10.966	5.192	10.239	5.115	9.511	5.037	8.784	4.960	7.911	4.868
	24	12.045	4.796	11.304	4.759	10.564	4.722	9.823	4.685	9.083	4.648	8.195	4.603

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R22 MODELS
(HEATPUMP)

MODEL : ACM 15ER / ALC 15CR

COOLING MODE

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	4.198	2.455	3.897	2.140	3.596	1.825	3.295	1.510	2.995	1.195	2.634	0.816
	16	4.255	2.390	3.958	2.065	3.660	1.741	3.363	1.417	3.066	1.093	2.709	0.704
24	16	4.255	3.353	3.958	3.029	3.660	2.705	3.363	2.381	3.066	2.056	2.709	1.667
	17	4.313	3.288	4.019	2.955	3.725	2.621	3.431	2.288	3.137	1.954	2.784	1.554
	18	4.370	3.224	4.080	2.881	3.789	2.538	3.498	2.195	3.208	1.853	2.859	1.441
	19	4.428	3.159	4.140	2.807	3.853	2.455	3.566	2.103	3.279	1.751	2.934	1.328
	20	4.486	3.095	4.207	2.744	3.928	2.393	3.649	2.042	3.370	1.691	3.036	1.270
28	18	4.370	4.187	4.080	3.844	3.789	3.502	3.498	3.159	3.208	2.816	2.859	2.405
	19	4.428	4.122	4.140	3.770	3.853	3.418	3.566	3.066	3.279	2.714	2.934	2.292
	20	4.486	4.059	4.207	3.708	3.928	3.357	3.649	3.006	3.370	2.655	3.036	2.234
	21	4.544	3.996	4.277	3.653	4.010	3.310	3.742	2.967	3.475	2.624	3.154	2.213
	22	4.603	3.933	4.347	3.598	4.091	3.263	3.836	2.928	3.580	2.593	3.273	2.192
	23	4.661	3.870	4.417	3.543	4.173	3.216	3.929	2.890	3.685	2.563	3.392	2.170
	24	4.720	3.807	4.487	3.489	4.255	3.170	4.022	2.851	3.790	2.532	3.511	2.149
30	20	4.540	4.540	4.207	4.190	3.928	3.839	3.649	3.488	3.370	3.137	3.036	2.716
	21	4.544	4.478	4.277	4.135	4.010	3.792	3.742	3.449	3.475	3.106	3.154	2.695
	22	4.603	4.415	4.347	4.080	4.091	3.745	3.836	3.410	3.580	3.075	3.273	2.673
	23	4.661	4.352	4.417	4.025	4.173	3.698	3.929	3.371	3.685	3.044	3.392	2.652
	24	4.720	4.289	4.487	3.970	4.255	3.651	4.022	3.333	3.790	3.014	3.511	2.631

HEATING MODE

ID DB°C	Outdoor WB°C												
	-9		-6		-5		6		12		15		18	
	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
15	1.760	1.760	2.115	2.115	2.233	2.233	3.532	3.532	4.241	4.241	4.596	4.596	4.950	4.950
17	1.738	1.738	2.079	2.079	2.192	2.192	3.471	3.471	4.127	4.127	4.468	4.468	4.809	4.809
19	1.716	1.716	2.043	2.043	2.152	2.152	3.410	3.410	4.012	4.012	4.340	4.340	4.669	4.669
21	1.693	1.693	2.007	2.007	2.111	2.111	3.350	3.350	3.897	3.897	4.213	4.213	4.528	4.528
23	1.669	1.669	1.970	1.970	2.071	2.071	3.232	3.232	3.783	3.783	4.085	4.085	4.387	4.387
25	1.645	1.645	1.934	1.934	2.030	2.030	3.115	3.115	3.668	3.668	3.957	3.957	4.246	4.246
27	1.621	1.621	1.897	1.897	1.989	1.989	2.997	2.997	3.554	3.554	3.830	3.830	4.106	4.106
	FROST REGION													

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R22 MODELS
(HEATPUMP)

MODEL : ACM 20ER / ALC 18CR

COOLING MODE

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	5.743	3.699	5.397	3.404	5.050	3.110	4.703	2.816	4.356	2.522	3.940	2.168
	16	5.969	3.449	5.599	3.179	5.228	2.910	4.858	2.640	4.488	2.371	4.044	2.047
24	16	5.969	4.359	5.599	4.090	5.228	3.820	4.858	3.551	4.488	3.281	4.044	2.958
	17	6.194	4.109	5.800	3.864	5.407	3.620	5.014	3.375	4.621	3.130	4.149	2.837
	18	6.419	3.859	6.002	3.639	5.586	3.419	5.169	3.199	4.753	2.979	4.253	2.715
	19	6.644	3.609	6.204	3.414	5.765	3.219	5.325	3.023	4.885	2.828	4.358	2.594
	20	6.870	3.358	6.417	3.183	5.963	3.008	5.510	2.833	5.056	2.658	4.512	2.448
28	18	6.419	4.770	6.002	4.550	5.586	4.330	5.169	4.110	4.753	3.890	4.253	3.626
	19	6.644	4.520	6.204	4.324	5.765	4.129	5.325	3.934	4.885	3.739	4.358	3.505
	20	6.870	4.269	6.417	4.094	5.963	3.919	5.510	3.744	5.056	3.569	4.512	3.359
	21	7.097	4.018	6.636	3.860	6.175	3.702	5.714	3.544	5.253	3.386	4.700	3.196
	22	7.324	3.767	6.855	3.626	6.387	3.485	5.918	3.344	5.450	3.202	4.888	3.033
	23	7.551	3.516	7.075	3.392	6.599	3.268	6.123	3.143	5.647	3.019	5.075	2.871
	24	7.778	3.265	7.294	3.158	6.811	3.050	6.327	2.943	5.844	2.836	5.263	2.708
30	20	6.870	4.724	6.417	4.549	5.963	4.374	5.510	4.199	5.056	4.024	4.512	3.814
	21	7.097	4.473	6.636	4.315	6.175	4.157	5.714	3.999	5.253	3.841	4.700	3.651
	22	7.324	4.222	6.855	4.081	6.387	3.940	5.918	3.799	5.450	3.658	4.888	3.489
	23	7.551	3.971	7.075	3.847	6.599	3.723	6.123	3.599	5.647	3.475	5.075	3.326
	24	7.778	3.720	7.294	3.613	6.811	3.506	6.327	3.399	5.844	3.292	5.263	3.163

HEATING MODE

ID DB°C	Outdoor WB°C												
	-9		-6		-5		6		12		15		18	
	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
15	2.597	2.597	3.151	3.151	3.335	3.335	5.366	5.366	6.474	6.474	7.028	7.028	7.582	7.582
17	2.556	2.556	3.094	3.094	3.274	3.274	5.299	5.299	6.299	6.299	6.833	6.833	7.367	7.367
19	2.516	2.516	3.038	3.038	3.213	3.213	5.231	5.231	6.124	6.124	6.637	6.637	7.151	7.151
21	2.475	2.475	2.982	2.982	3.151	3.151	5.164	5.164	5.948	5.948	6.442	6.442	6.935	6.935
23	2.447	2.447	2.929	2.929	3.090	3.090	4.958	4.958	5.773	5.773	6.246	6.246	6.720	6.720
25	2.419	2.419	2.876	2.876	3.028	3.028	4.751	4.751	5.597	5.597	6.051	6.051	6.504	6.504
27	2.390	2.390	2.823	2.823	2.967	2.967	4.545	4.545	5.422	5.422	5.855	5.855	6.289	6.289
	FROST REGION													

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R22 MODELS
(HEATPUMP)

MODEL : ACM 20ER / ALC 20CR

COOLING MODE

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	5.850	3.645	5.531	3.384	5.213	3.123	4.894	2.862	4.575	2.602	4.193	2.288
	16	6.081	3.339	5.746	3.114	5.410	2.889	5.074	2.664	4.738	2.439	4.335	2.169
24	16	6.081	4.310	5.746	4.085	5.410	3.860	5.074	3.635	4.738	3.410	4.335	3.140
	17	6.313	4.004	5.960	3.814	5.607	3.625	5.254	3.436	4.900	3.247	4.477	3.020
	18	6.544	3.697	6.174	3.544	5.804	3.391	5.433	3.238	5.063	3.085	4.619	2.901
	19	6.776	3.391	6.388	3.274	6.001	3.157	5.613	3.039	5.226	2.922	4.761	2.781
	20	7.008	3.084	6.605	2.993	6.202	2.902	5.800	2.811	5.397	2.720	4.914	2.610
28	18	6.544	4.668	6.174	4.515	5.804	4.362	5.433	4.209	5.063	4.055	4.619	3.872
	19	6.776	4.362	6.388	4.245	6.001	4.127	5.613	4.010	5.226	3.893	4.761	3.752
	20	7.008	4.054	6.605	3.963	6.202	3.872	5.800	3.781	5.397	3.690	4.914	3.581
	21	7.240	3.746	6.823	3.675	6.407	3.604	5.990	3.532	5.574	3.461	5.074	3.376
	22	7.472	3.438	7.041	3.386	6.611	3.335	6.181	3.284	5.750	3.232	5.234	3.170
	23	7.703	3.130	7.259	3.098	6.815	3.066	6.371	3.035	5.927	3.003	5.394	2.965
	24	7.935	2.822	7.477	2.810	7.020	2.798	6.562	2.786	6.104	2.774	5.554	2.759
30	20	7.008	4.540	6.605	4.449	6.202	4.358	5.800	4.267	5.397	4.176	4.914	4.067
	21	7.240	4.232	6.823	4.160	6.407	4.089	5.990	4.018	5.574	3.947	5.074	3.861
	22	7.472	3.923	7.041	3.872	6.611	3.820	6.181	3.769	5.750	3.717	5.234	3.656
	23	7.703	3.615	7.259	3.583	6.815	3.552	6.371	3.520	5.927	3.488	5.394	3.450
	24	7.935	3.307	7.477	3.295	7.020	3.283	6.562	3.271	6.104	3.259	5.554	3.245

HEATING MODE

ID DB°C	Outdoor WB°C												
	-9		-6		-5		6		12		15		18	
	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
15	2.506	2.506	3.124	3.124	3.330	3.330	5.597	5.597	6.834	6.834	7.452	7.452	8.071	8.071
17	2.446	2.446	3.062	3.062	3.267	3.267	5.499	5.499	6.648	6.648	7.245	7.245	7.841	7.841
19	2.386	2.386	2.999	2.999	3.204	3.204	5.401	5.401	6.462	6.462	7.037	7.037	7.612	7.612
21	2.326	2.326	2.937	2.937	3.140	3.140	5.303	5.303	6.276	6.276	6.829	6.829	7.382	7.382
23	2.319	2.319	2.887	2.887	3.077	3.077	5.113	5.113	6.089	6.089	6.621	6.621	7.153	7.153
25	2.311	2.311	2.838	2.838	3.014	3.014	4.924	4.924	5.903	5.903	6.413	6.413	6.923	6.923
27	2.304	2.304	2.789	2.789	2.951	2.951	4.734	4.734	5.717	5.717	6.205	6.205	6.694	6.694
	FROST REGION													

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R22 MODELS
(HEATPUMP)

MODEL : ACM 25ER / ALC 25CR
COOLING MODE

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	7.548	5.116	7.125	4.731	6.702	4.345	6.278	3.960	5.855	3.574	5.347	3.112
	16	7.724	4.701	7.311	4.360	6.897	4.019	6.484	3.678	6.070	3.336	5.573	2.927
24	16	7.724	5.768	7.311	5.427	6.897	5.086	6.484	4.745	6.070	4.404	5.573	3.994
	17	7.900	5.353	7.497	5.056	7.093	4.759	6.689	4.462	6.285	4.166	5.800	3.810
	18	8.077	4.937	7.682	4.685	7.288	4.433	6.894	4.180	6.499	3.928	6.026	3.625
	19	8.253	4.522	7.868	4.314	7.483	4.106	7.099	3.898	6.714	3.690	6.252	3.441
	20	8.428	4.106	8.044	3.938	7.660	3.769	7.275	3.601	6.891	3.433	6.431	3.231
28	18	8.077	6.004	7.682	5.752	7.288	5.500	6.894	5.247	6.499	4.995	6.026	4.692
	19	8.253	5.589	7.868	5.381	7.483	5.173	7.099	4.965	6.714	4.757	6.252	4.508
	20	8.428	5.173	8.044	5.005	7.660	4.837	7.275	4.668	6.891	4.500	6.431	4.298
	21	8.602	4.757	8.212	4.625	7.823	4.493	7.434	4.362	7.044	4.230	6.577	4.072
	22	8.776	4.340	8.381	4.245	7.986	4.150	7.592	4.055	7.197	3.960	6.723	3.845
	23	8.950	3.924	8.550	3.865	8.150	3.807	7.750	3.748	7.350	3.689	6.869	3.619
	24	9.125	3.508	8.719	3.486	8.313	3.463	7.908	3.441	7.502	3.419	7.015	3.393
30	20	8.428	5.707	8.044	5.538	7.660	5.370	7.275	5.202	6.891	5.034	6.431	4.832
	21	8.602	5.290	8.212	5.159	7.823	5.027	7.434	4.895	7.044	4.763	6.577	4.605
	22	8.776	4.874	8.381	4.779	7.986	4.684	7.592	4.588	7.197	4.493	6.723	4.379
	23	8.950	4.458	8.550	4.399	8.150	4.340	7.750	4.282	7.350	4.223	6.869	4.153
	24	9.125	4.041	8.719	4.019	8.313	3.997	7.908	3.975	7.502	3.953	7.015	3.926

HEATING MODE

ID DB°C	Outdoor WB°C												
	-9		-6		-5		6		12		15		18	
	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
15	3.228	3.228	4.000	4.000	4.257	4.257	7.088	7.088	8.633	8.633	9.405	9.405	10.177	10.177
17	3.157	3.157	3.922	3.922	4.177	4.177	7.052	7.052	8.398	8.398	9.143	9.143	9.887	9.887
19	3.086	3.086	3.844	3.844	4.097	4.097	7.015	7.015	8.163	8.163	8.880	8.880	9.598	9.598
21	3.015	3.015	3.766	3.766	4.016	4.016	6.978	6.978	7.928	7.928	8.618	8.618	9.309	9.309
23	2.999	2.999	3.702	3.702	3.936	3.936	6.647	6.647	7.693	7.693	8.356	8.356	9.019	9.019
25	2.984	2.984	3.638	3.638	3.856	3.856	6.315	6.315	7.458	7.458	8.094	8.094	8.730	8.730
27	2.968	2.968	3.574	3.574	3.775	3.775	5.984	5.984	7.223	7.223	7.832	7.832	8.440	8.440
	FROST REGION													

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R22 MODELS
(HEATPUMP)

MODEL : ACM 28ER / ALC 28CR
COOLING MODE

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	8.627	5.602	8.148	5.215	7.669	4.828	7.190	4.441	6.711	4.054	6.136	3.589
	16	9.034	5.190	8.509	4.841	7.985	4.492	7.460	4.142	6.935	3.793	6.306	3.374
24	16	9.034	6.458	8.509	6.109	7.985	5.760	7.460	5.410	6.935	5.061	6.306	4.642
	17	9.442	6.047	8.871	5.735	8.301	5.423	7.730	5.112	7.160	4.800	6.475	4.426
	18	9.849	5.635	9.233	5.361	8.617	5.087	8.001	4.813	7.385	4.540	6.645	4.211
	19	10.256	5.223	9.595	4.987	8.933	4.751	8.271	4.515	7.609	4.279	6.815	3.996
	20	10.665	4.811	9.971	4.607	9.276	4.403	8.581	4.200	7.887	3.996	7.053	3.751
28	18	9.849	6.903	9.233	6.629	8.617	6.355	8.001	6.081	7.385	5.807	6.645	5.479
	19	10.256	6.491	9.595	6.255	8.933	6.019	8.271	5.783	7.609	5.547	6.815	5.264
	20	10.665	6.078	9.971	5.875	9.276	5.671	8.581	5.467	7.887	5.264	7.053	5.019
	21	11.075	5.666	10.356	5.491	9.637	5.315	8.918	5.140	8.199	4.965	7.336	4.755
	22	11.485	5.253	10.742	5.106	9.999	4.960	9.255	4.813	8.512	4.667	7.620	4.491
	23	11.895	4.840	11.128	4.722	10.360	4.604	9.592	4.486	8.824	4.368	7.903	4.226
	24	12.305	4.427	11.513	4.338	10.721	4.248	9.929	4.159	9.137	4.069	8.186	3.962
30	20	10.665	6.712	9.971	6.509	9.276	6.305	8.581	6.101	7.887	5.897	7.053	5.653
	21	11.075	6.300	10.356	6.124	9.637	5.949	8.918	5.774	8.199	5.599	7.336	5.389
	22	11.485	5.887	10.742	5.740	9.999	5.594	9.255	5.447	8.512	5.300	7.620	5.124
	23	11.895	5.474	11.128	5.356	10.360	5.238	9.592	5.120	8.824	5.002	7.903	4.860
	24	12.305	5.061	11.513	4.972	10.721	4.882	9.929	4.793	9.137	4.703	8.186	4.596

HEATING MODE

ID DB°C	Outdoor WB°C												
	-9		-6		-5		6		12		15		18	
	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
15	3.707	3.707	4.621	4.621	4.926	4.926	8.276	8.276	10.103	10.103	11.017	11.017	11.931	11.931
17	3.619	3.619	4.529	4.529	4.832	4.832	8.122	8.122	9.828	9.828	10.710	10.710	11.591	11.591
19	3.531	3.531	4.437	4.437	4.739	4.739	7.969	7.969	9.553	9.553	10.402	10.402	11.252	11.252
21	3.443	3.443	4.344	4.344	4.645	4.645	7.816	7.816	9.278	9.278	10.095	10.095	10.913	10.913
23	3.431	3.431	4.271	4.271	4.552	4.552	7.544	7.544	9.003	9.003	9.788	9.788	10.573	10.573
25	3.420	3.420	4.198	4.198	4.458	4.458	7.272	7.272	8.727	8.727	9.481	9.481	10.234	10.234
27	3.409	3.409	4.125	4.125	4.364	4.364	7.000	7.000	8.452	8.452	9.173	9.173	9.895	9.895
	FROST REGION													

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R22 MODELS
(HEATPUMP)

MODEL : ACM 28ER / ALC 30CR
COOLING MODE

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	8.897	5.879	8.367	5.441	7.837	5.003	7.307	4.564	6.778	4.126	6.142	3.600
	16	9.245	5.407	8.681	5.018	8.117	4.629	7.553	4.240	6.989	3.851	6.312	3.385
24	16	9.245	6.675	8.681	6.286	8.117	5.897	7.553	5.508	6.989	5.119	6.312	4.653
	17	9.594	6.203	8.995	5.863	8.397	5.524	7.798	5.184	7.200	4.844	6.482	4.437
	18	9.942	5.731	9.309	5.441	8.677	5.150	8.044	4.860	7.411	4.570	6.652	4.221
	19	10.290	5.259	9.623	5.018	8.956	4.777	8.289	4.536	7.622	4.295	6.822	4.006
	20	10.640	4.786	9.952	4.589	9.263	4.392	8.575	4.195	7.886	3.997	7.060	3.761
28	18	9.942	6.999	9.309	6.708	8.677	6.418	8.044	6.128	7.411	5.837	6.652	5.489
	19	10.290	6.527	9.623	6.286	8.956	6.045	8.289	5.804	7.622	5.563	6.822	5.273
	20	10.640	6.054	9.952	5.857	9.263	5.660	8.575	5.462	7.886	5.265	7.060	5.028
	21	10.992	5.581	10.290	5.424	9.588	5.267	8.887	5.109	8.185	4.952	7.344	4.764
	22	11.343	5.108	10.628	4.991	9.914	4.874	9.199	4.757	8.485	4.639	7.627	4.499
	23	11.694	4.635	10.966	4.558	10.239	4.481	9.511	4.404	8.784	4.326	7.911	4.234
	24	12.045	4.162	11.304	4.125	10.564	4.088	9.823	4.051	9.083	4.014	8.195	3.969
30	20	10.640	6.688	9.952	6.491	9.263	6.293	8.575	6.096	7.886	5.899	7.060	5.662
	21	10.992	6.215	10.290	6.058	9.588	5.901	8.887	5.743	8.185	5.586	7.344	5.397
	22	11.343	5.742	10.628	5.625	9.914	5.508	9.199	5.390	8.485	5.273	7.627	5.133
	23	11.694	5.269	10.966	5.192	10.239	5.115	9.511	5.037	8.784	4.960	7.911	4.868
	24	12.045	4.796	11.304	4.759	10.564	4.722	9.823	4.685	9.083	4.648	8.195	4.603

HEATING MODE

ID DB°C	Outdoor WB°C												
	-9		-6		-5		6		12		15		18	
	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
15	3.707	3.707	4.621	4.621	4.926	4.926	8.276	8.276	10.103	10.103	11.017	11.017	11.931	11.931
17	3.619	3.619	4.529	4.529	4.832	4.832	8.122	8.122	9.828	9.828	10.710	10.710	11.591	11.591
19	3.531	3.531	4.437	4.437	4.739	4.739	7.969	7.969	9.553	9.553	10.402	10.402	11.252	11.252
21	3.443	3.443	4.344	4.344	4.645	4.645	7.816	7.816	9.278	9.278	10.095	10.095	10.913	10.913
23	3.431	3.431	4.271	4.271	4.552	4.552	7.544	7.544	9.003	9.003	9.788	9.788	10.573	10.573
25	3.420	3.420	4.198	4.198	4.458	4.458	7.272	7.272	8.727	8.727	9.481	9.481	10.234	10.234
27	3.409	3.409	4.125	4.125	4.364	4.364	7.000	7.000	8.452	8.452	9.173	9.173	9.895	9.895
	FROST REGION													

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R410A MODELS
(COOLING ONLY)

MODEL : A5CM 15E / A5LC 15C

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	4.362	2.573	3.980	2.190	3.593	1.802	3.206	1.414	2.819	1.027	2.354	0.562
	16	4.440	2.359	4.074	2.005	3.706	1.648	3.338	1.292	2.970	0.936	2.528	0.508
24	16	4.440	3.385	4.074	3.031	3.706	2.675	3.338	2.318	2.970	1.962	2.528	1.534
	17	4.517	3.171	4.168	2.846	3.819	2.521	3.470	2.196	3.121	1.871	2.702	1.481
	18	4.597	2.960	4.266	2.665	3.935	2.370	3.604	2.075	3.273	1.781	2.876	1.427
	19	4.679	2.753	4.380	2.515	4.082	2.276	3.783	2.038	3.450	1.736	3.050	1.373
	20	4.752	2.529	4.437	2.257	4.122	1.986	3.807	1.714	3.492	1.443	3.114	1.117
28	18	4.597	3.986	4.266	3.691	3.935	3.396	3.604	3.102	3.273	2.807	2.876	2.453
	19	4.679	3.779	4.380	3.541	4.082	3.302	3.783	3.064	3.450	2.762	3.050	2.400
	20	4.752	3.555	4.437	3.283	4.122	3.012	3.807	2.740	3.492	2.469	3.114	2.143
	21	4.827	3.336	4.510	3.057	4.193	2.778	3.876	2.500	3.559	2.221	3.178	1.887
	22	4.903	3.116	4.583	2.831	4.264	2.545	3.945	2.259	3.625	1.974	3.242	1.631
	23	4.978	2.897	4.657	2.604	4.335	2.312	4.014	2.019	3.692	1.726	3.306	1.374
	24	5.054	2.678	4.730	2.378	4.406	2.078	4.082	1.778	3.759	1.478	3.370	1.118
30	20	4.752	4.068	4.437	3.796	4.122	3.525	3.807	3.254	3.492	2.982	3.114	2.656
	21	4.827	3.849	4.510	3.570	4.193	3.292	3.876	3.013	3.559	2.734	3.178	2.400
	22	4.903	3.630	4.583	3.344	4.264	3.058	3.945	2.772	3.625	2.487	3.242	2.144
	23	4.978	3.410	4.657	3.117	4.335	2.825	4.014	2.532	3.692	2.239	3.306	1.887
	24	5.054	3.191	4.730	2.891	4.406	2.591	4.082	2.291	3.759	1.991	3.370	1.631

MODEL : A5CM 20E / A5LC 20C (1 PHASE)

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	5.715	3.788	5.176	3.247	4.622	2.692	4.068	2.137	3.514	1.581	2.849	0.915
	16	5.842	3.492	5.34	2.99	4.83	2.481	4.32	1.971	3.811	1.462	3.199	0.85
24	16	5.842	4.601	5.34	4.099	4.83	3.59	4.32	3.08	3.811	2.57	3.199	1.959
	17	5.968	4.306	5.503	3.842	5.038	3.378	4.573	2.914	4.107	2.451	3.549	1.894
	18	6.102	4.017	5.678	3.596	5.255	3.176	4.831	2.755	4.408	2.334	3.899	1.829
	19	6.238	3.737	5.868	3.403	5.498	3.068	5.128	2.733	4.729	2.293	4.249	1.764
	20	6.36	3.431	5.971	3.051	5.582	2.671	5.194	2.29	4.805	1.91	4.339	1.454
28	18	6.102	5.126	5.678	4.705	5.255	4.285	4.831	3.864	4.408	3.443	3.899	2.938
	19	6.238	4.846	5.868	4.512	5.498	4.177	5.128	3.842	4.729	3.402	4.249	2.873
	20	6.36	4.54	5.971	4.16	5.582	3.78	5.194	3.399	4.805	3.019	4.339	2.563
	21	6.484	4.243	6.088	3.86	5.693	3.477	5.298	3.094	4.902	2.712	4.428	2.252
	22	6.608	3.945	6.206	3.56	5.804	3.175	5.402	2.789	4.999	2.404	4.517	1.942
	23	6.732	3.648	6.323	3.26	5.914	2.872	5.505	2.484	5.097	2.097	4.606	1.631
	24	6.856	3.35	6.44	2.96	6.025	2.57	5.609	2.18	5.194	1.789	4.695	1.321
30	20	6.36	5.095	5.971	4.714	5.582	4.334	5.194	3.954	4.805	3.574	4.339	3.117
	21	6.484	4.797	6.088	4.414	5.693	4.032	5.298	3.649	4.902	3.266	4.428	2.807
	22	6.608	4.5	6.206	4.115	5.804	3.729	5.402	3.344	4.999	2.959	4.517	2.496
	23	6.732	4.202	6.323	3.815	5.914	3.427	5.505	3.039	5.097	2.651	4.606	2.186
	24	6.856	3.905	6.44	3.515	6.025	3.124	5.609	2.734	5.194	2.344	4.695	1.875

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R410A MODELS
(COOLING ONLY)

MODEL : A5CM 20E / A5LC 20C (3 PHASE)

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	5.670	3.743	5.205	3.276	4.741	2.812	4.278	2.347	3.815	1.883	3.258	1.325
	16	5.833	3.471	5.392	3.044	4.951	2.617	4.511	2.190	4.071	1.763	3.543	1.251
24	16	5.833	4.580	5.392	4.153	4.951	3.726	4.511	3.299	4.071	2.872	3.543	2.360
	17	5.995	4.309	5.578	3.920	5.161	3.531	4.744	3.142	4.327	2.753	3.827	2.286
	18	6.157	4.037	5.764	3.686	5.370	3.335	4.977	2.984	4.584	2.633	4.111	2.212
	19	6.324	3.766	5.984	3.463	5.644	3.159	5.304	2.855	4.891	2.529	4.396	2.137
	20	6.473	3.482	6.091	3.155	5.710	2.828	5.328	2.501	4.946	2.174	4.488	1.782
28	18	6.157	5.146	5.764	4.795	5.370	4.444	4.977	4.093	4.584	3.742	4.111	3.321
	19	6.324	4.875	5.984	4.572	5.644	4.268	5.304	3.964	4.891	3.638	4.396	3.246
	20	6.473	4.591	6.091	4.264	5.710	3.937	5.328	3.610	4.946	3.283	4.488	2.891
	21	6.627	4.308	6.234	3.967	5.840	3.627	5.446	3.286	5.053	2.945	4.580	2.536
	22	6.782	4.025	6.376	3.671	5.971	3.316	5.565	2.961	5.159	2.607	4.673	2.181
	23	6.936	3.743	6.519	3.374	6.101	3.005	5.684	2.637	5.266	2.268	4.765	1.826
	24	7.091	3.460	6.661	3.077	6.232	2.695	5.802	2.312	5.373	1.930	4.857	1.471
30	20	6.473	5.145	6.091	4.818	5.710	4.492	5.328	4.165	4.946	3.838	4.488	3.446
	21	6.627	4.863	6.234	4.522	5.840	4.181	5.446	3.840	5.053	3.499	4.580	3.091
	22	6.782	4.580	6.376	4.225	5.971	3.870	5.565	3.516	5.159	3.161	4.673	2.735
	23	6.936	4.297	6.519	3.929	6.101	3.560	5.684	3.191	5.266	2.823	4.765	2.380
	24	7.091	4.014	6.661	3.632	6.232	3.249	5.802	2.867	5.373	2.484	4.857	2.025

MODEL : A5CM 25E / A5LC 25C (1 PHASE)

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	5.924	4.060	5.602	3.715	5.279	3.405	4.956	3.096	4.633	2.787	4.246	2.416
	16	6.138	3.823	5.810	3.519	5.481	3.233	5.153	2.947	4.824	2.662	4.430	2.319
24	16	6.138	4.870	5.810	4.566	5.481	4.281	5.153	3.995	4.824	3.710	4.430	3.367
	17	6.352	4.633	6.018	4.371	5.684	4.109	5.349	3.847	5.015	3.585	4.614	3.270
	18	6.567	4.378	6.227	4.146	5.886	3.915	5.546	3.683	5.206	3.452	4.798	3.174
	19	6.789	4.112	6.479	3.854	6.170	3.595	5.860	3.337	5.461	3.219	4.981	3.077
	20	6.993	3.855	6.626	3.616	6.260	3.378	5.893	3.140	5.526	2.901	5.086	2.615
28	18	6.567	5.426	6.227	5.194	5.886	4.963	5.546	4.731	5.206	4.499	4.798	4.221
	19	6.789	5.160	6.479	4.901	6.170	4.643	5.860	4.385	5.461	4.267	4.981	4.125
	20	6.993	4.903	6.626	4.664	6.260	4.426	5.893	4.187	5.526	3.949	5.086	3.663
	21	7.205	4.634	6.817	4.359	6.430	4.083	6.043	3.807	5.655	3.532	5.191	3.201
	22	7.416	4.366	7.008	4.053	6.600	3.740	6.193	3.427	5.785	3.114	5.295	2.739
	23	7.628	4.098	7.199	3.748	6.771	3.397	6.342	3.047	5.914	2.697	5.400	2.277
	24	7.839	3.829	7.390	3.442	6.941	3.055	6.492	2.667	6.043	2.280	5.504	1.815
30	20	6.993	5.427	6.626	5.188	6.260	4.950	5.893	4.711	5.526	4.473	5.086	4.187
	21	7.205	5.158	6.817	4.883	6.430	4.607	6.043	4.331	5.655	4.056	5.191	3.725
	22	7.416	4.890	7.008	4.577	6.600	4.264	6.193	3.951	5.785	3.638	5.295	3.263
	23	7.628	4.622	7.199	4.271	6.771	3.921	6.342	3.571	5.914	3.221	5.400	2.801
	24	7.839	4.353	7.390	3.966	6.941	3.578	6.492	3.191	6.043	2.804	5.504	2.339

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R410A MODELS
(COOLING ONLY)

MODEL : A5CM 25E / A5LC 25C (3 PHASE)

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	6.763	4.405	6.436	4.061	6.057	3.765	5.677	3.469	5.298	3.173	4.842	2.818
	16	6.992	4.182	6.649	3.879	6.279	3.600	5.910	3.321	5.540	3.042	5.097	2.708
24	16	6.992	5.341	6.649	5.038	6.279	4.759	5.910	4.480	5.540	4.201	5.097	3.867
	17	7.221	5.117	6.861	4.855	6.502	4.594	6.142	4.332	5.783	4.071	5.351	3.757
	18	7.474	4.871	7.115	4.635	6.755	4.400	6.396	4.164	6.037	3.929	5.606	3.646
	19	7.730	4.623	7.386	4.406	7.042	4.188	6.699	3.971	6.318	3.773	5.860	3.536
	20	7.975	4.363	7.592	4.103	7.209	3.842	6.826	3.582	6.443	3.322	5.984	3.009
28	18	7.474	6.030	7.115	5.794	6.755	5.559	6.396	5.323	6.037	5.088	5.606	4.805
	19	7.730	5.782	7.386	5.565	7.042	5.347	6.699	5.130	6.318	4.932	5.860	4.695
	20	7.975	5.522	7.592	5.262	7.209	5.001	6.826	4.741	6.443	4.481	5.984	4.168
	21	8.223	5.260	7.816	4.949	7.409	4.638	7.002	4.326	6.595	4.015	6.107	3.641
	22	8.471	4.999	8.040	4.636	7.609	4.274	7.178	3.912	6.747	3.549	6.230	3.115
	23	8.719	4.737	8.264	4.324	7.809	3.910	7.354	3.497	6.899	3.084	6.353	2.588
	24	8.967	4.476	8.488	4.011	8.009	3.547	7.530	3.082	7.051	2.618	6.476	2.061
30	20	7.975	6.101	7.592	5.841	7.209	5.581	6.826	5.321	6.443	5.060	5.984	4.748
	21	8.223	5.840	7.816	5.529	7.409	5.217	7.002	4.906	6.595	4.595	6.107	4.221
	22	8.471	5.578	8.040	5.216	7.609	4.854	7.178	4.491	6.747	4.129	6.230	3.694
	23	8.719	5.317	8.264	4.903	7.809	4.490	7.354	4.077	6.899	3.663	6.353	3.167
	24	8.967	5.055	8.488	4.591	8.009	4.126	7.530	3.662	7.051	3.198	6.476	2.640

MODEL : A5CM 28E / A5LC 28C

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	8.117	5.375	7.585	4.821	6.954	4.289	6.323	3.757	5.693	3.225	4.936	2.587
	16	8.318	5.027	7.780	4.527	7.192	4.039	6.605	3.550	6.018	3.061	5.314	2.475
24	16	8.318	6.369	7.780	5.869	7.192	5.381	6.605	4.892	6.018	4.404	5.314	3.817
	17	8.518	6.022	7.975	5.576	7.431	5.131	6.888	4.685	6.344	4.240	5.692	3.705
	18	8.764	5.664	8.246	5.265	7.728	4.867	7.210	4.469	6.691	4.071	6.070	3.593
	19	9.015	5.298	8.550	4.910	8.085	4.521	7.620	4.133	7.087	3.837	6.448	3.481
	20	9.246	4.931	8.734	4.549	8.222	4.167	7.710	3.785	7.198	3.403	6.583	2.944
28	18	8.764	7.006	8.246	6.607	7.728	6.209	7.210	5.811	6.691	5.413	6.070	4.935
	19	9.015	6.640	8.550	6.252	8.085	5.864	7.620	5.475	7.087	5.179	6.448	4.823
	20	9.246	6.273	8.734	5.891	8.222	5.509	7.710	5.127	7.198	4.745	6.583	4.286
	21	9.482	5.899	8.951	5.486	8.419	5.073	7.888	4.659	7.356	4.246	6.719	3.749
	22	9.719	5.526	9.168	5.081	8.617	4.636	8.066	4.191	7.515	3.746	6.854	3.213
	23	9.956	5.152	9.385	4.676	8.815	4.199	8.244	3.723	7.674	3.247	6.989	2.676
	24	10.192	4.778	9.602	4.270	9.012	3.763	8.423	3.256	7.833	2.748	7.125	2.139
30	20	9.246	6.944	8.734	6.562	8.222	6.180	7.710	5.798	7.198	5.416	6.583	4.957
	21	9.482	6.571	8.951	6.157	8.419	5.744	7.888	5.330	7.356	4.917	6.719	4.420
	22	9.719	6.197	9.168	5.752	8.617	5.307	8.066	4.862	7.515	4.417	6.854	3.884
	23	9.956	5.823	9.385	5.347	8.815	4.870	8.244	4.394	7.674	3.918	6.989	3.347
	24	10.192	5.449	9.602	4.941	9.012	4.434	8.423	3.927	7.833	3.419	7.125	2.810

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R410A MODELS
(COOLING ONLY)

MODEL : A5CM 28E / A5LC 35C

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	8.685	5.958	8.373	5.617	8.022	5.364	7.670	5.111	7.318	4.858	6.897	4.555
	16	9.015	5.683	8.659	5.401	8.283	5.162	7.907	4.923	7.531	4.684	7.079	4.398
24	16	9.015	7.025	8.659	6.743	8.283	6.504	7.907	6.265	7.531	6.026	7.079	5.740
	17	9.345	6.751	8.944	6.526	8.544	6.302	8.143	6.077	7.743	5.852	7.262	5.583
	18	9.693	6.435	9.261	6.241	8.828	6.047	8.396	5.853	7.964	5.659	7.445	5.426
	19	10.051	6.097	9.634	5.821	9.218	5.546	8.801	5.271	8.268	5.270	7.628	5.269
	20	10.389	5.781	9.889	5.539	9.389	5.296	8.888	5.053	8.388	4.810	7.788	4.519
28	18	9.693	7.777	9.261	7.583	8.828	7.389	8.396	7.195	7.964	7.001	7.445	6.768
	19	10.051	7.439	9.634	7.163	9.218	6.888	8.801	6.613	8.268	6.612	7.628	6.611
	20	10.389	7.123	9.889	6.881	9.389	6.638	8.888	6.395	8.388	6.152	7.788	5.861
	21	10.737	6.786	10.200	6.463	9.664	6.141	9.128	5.819	8.592	5.497	7.948	5.110
	22	11.084	6.448	10.512	6.046	9.940	5.645	9.367	5.243	8.795	4.842	8.108	4.360
	23	11.432	6.110	10.823	5.629	10.215	5.148	9.607	4.667	8.998	4.186	8.269	3.609
	24	11.779	5.772	11.135	5.212	10.491	4.652	9.846	4.091	9.202	3.531	8.429	2.858
30	20	10.389	7.794	9.889	7.552	9.389	7.309	8.888	7.066	8.388	6.823	7.788	6.532
	21	10.737	7.457	10.200	7.135	9.664	6.812	9.128	6.490	8.592	6.168	7.948	5.781
	22	11.084	7.119	10.512	6.717	9.940	6.316	9.367	5.914	8.795	5.513	8.108	5.031
	23	11.432	6.781	10.823	6.300	10.215	5.819	9.607	5.338	8.998	4.857	8.269	4.280
	24	11.779	6.444	11.135	5.883	10.491	5.323	9.846	4.762	9.202	4.202	8.429	3.529

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R410A MODELS
(HEATPUMP)

MODEL : A5CM 15ER / A5LC 15CR

COOLING MODE

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	4.362	2.573	3.980	2.190	3.593	1.802	3.206	1.414	2.819	1.027	2.354	0.562
	16	4.440	2.359	4.074	2.005	3.706	1.648	3.338	1.292	2.970	0.936	2.528	0.508
24	16	4.440	3.385	4.074	3.031	3.706	2.675	3.338	2.318	2.970	1.962	2.528	1.534
	17	4.517	3.171	4.168	2.846	3.819	2.521	3.470	2.196	3.121	1.871	2.702	1.481
	18	4.597	2.960	4.266	2.665	3.935	2.370	3.604	2.075	3.273	1.781	2.876	1.427
	19	4.679	2.753	4.380	2.515	4.082	2.276	3.783	2.038	3.450	1.736	3.050	1.373
	20	4.752	2.529	4.437	2.257	4.122	1.986	3.807	1.714	3.492	1.443	3.114	1.117
28	18	4.597	3.986	4.266	3.691	3.935	3.396	3.604	3.102	3.273	2.807	2.876	2.453
	19	4.679	3.779	4.380	3.541	4.082	3.302	3.783	3.064	3.450	2.762	3.050	2.400
	20	4.752	3.555	4.437	3.283	4.122	3.012	3.807	2.740	3.492	2.469	3.114	2.143
	21	4.827	3.336	4.510	3.057	4.193	2.778	3.876	2.500	3.559	2.221	3.178	1.887
	22	4.903	3.116	4.583	2.831	4.264	2.545	3.945	2.259	3.625	1.974	3.242	1.631
	23	4.978	2.897	4.657	2.604	4.335	2.312	4.014	2.019	3.692	1.726	3.306	1.374
	24	5.054	2.678	4.730	2.378	4.406	2.078	4.082	1.778	3.759	1.478	3.370	1.118
30	20	4.752	4.068	4.437	3.796	4.122	3.525	3.807	3.254	3.492	2.982	3.114	2.656
	21	4.827	3.849	4.510	3.570	4.193	3.292	3.876	3.013	3.559	2.734	3.178	2.400
	22	4.903	3.630	4.583	3.344	4.264	3.058	3.945	2.772	3.625	2.487	3.242	2.144
	23	4.978	3.410	4.657	3.117	4.335	2.825	4.014	2.532	3.692	2.239	3.306	1.887
	24	5.054	3.191	4.730	2.891	4.406	2.591	4.082	2.291	3.759	1.991	3.370	1.631

HEATING MODE

ID DB°C	Outdoor WB°C												
	-9		-6		-5		6		12		15		18	
	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
15	2.091	2.091	2.366	2.366	2.458	2.458	3.469	3.469	4.020	4.020	4.296	4.296	4.571	4.571
17	2.036	2.036	2.334	2.334	2.405	2.405	3.465	3.465	3.974	3.974	4.251	4.251	4.527	4.527
19	1.981	1.981	2.302	2.302	2.352	2.352	3.460	3.460	3.927	3.927	4.205	4.205	4.484	4.484
21	1.926	1.926	2.252	2.252	2.299	2.299	3.418	3.418	3.881	3.881	4.160	4.160	4.440	4.440
23	1.871	1.871	2.183	2.183	2.245	2.245	3.338	3.338	3.835	3.835	4.115	4.115	4.396	4.396
25	1.817	1.817	2.114	2.114	2.192	2.192	3.257	3.257	3.789	3.789	4.070	4.070	4.352	4.352
27	1.762	1.762	2.045	2.045	2.139	2.139	3.177	3.177	3.742	3.742	4.025	4.025	4.308	4.308
	FROST REGION													

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R410A MODELS
(HEATPUMP)

MODEL : A5CM 20ER / A5LC 20CR (1 PHASE)

COOLING MODE

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	5.715	3.788	5.176	3.247	4.622	2.692	4.068	2.137	3.514	1.581	2.849	0.915
	16	5.842	3.492	5.340	2.990	4.830	2.481	4.320	1.971	3.811	1.462	3.199	0.850
24	16	5.842	4.601	5.340	4.099	4.830	3.590	4.320	3.080	3.811	2.570	3.199	1.959
	17	5.968	4.306	5.503	3.842	5.038	3.378	4.573	2.914	4.107	2.451	3.549	1.894
	18	6.102	4.017	5.678	3.596	5.255	3.176	4.831	2.755	4.408	2.334	3.899	1.829
	19	6.238	3.737	5.868	3.403	5.498	3.068	5.128	2.733	4.729	2.293	4.249	1.764
	20	6.360	3.431	5.971	3.051	5.582	2.671	5.194	2.290	4.805	1.910	4.339	1.454
28	18	6.102	5.126	5.678	4.705	5.255	4.285	4.831	3.864	4.408	3.443	3.899	2.938
	19	6.238	4.846	5.868	4.512	5.498	4.177	5.128	3.842	4.729	3.402	4.249	2.873
	20	6.360	4.540	5.971	4.160	5.582	3.780	5.194	3.399	4.805	3.019	4.339	2.563
	21	6.484	4.243	6.088	3.860	5.693	3.477	5.298	3.094	4.902	2.712	4.428	2.252
	22	6.608	3.945	6.206	3.560	5.804	3.175	5.402	2.789	4.999	2.404	4.517	1.942
	23	6.732	3.648	6.323	3.260	5.914	2.872	5.505	2.484	5.097	2.097	4.606	1.631
	24	6.856	3.350	6.440	2.960	6.025	2.570	5.609	2.180	5.194	1.789	4.695	1.321
30	20	6.360	5.095	5.971	4.714	5.582	4.334	5.194	3.954	4.805	3.574	4.339	3.117
	21	6.484	4.797	6.088	4.414	5.693	4.032	5.298	3.649	4.902	3.266	4.428	2.807
	22	6.608	4.500	6.206	4.115	5.804	3.729	5.402	3.344	4.999	2.959	4.517	2.496
	23	6.732	4.202	6.323	3.815	5.914	3.427	5.505	3.039	5.097	2.651	4.606	2.186
	24	6.856	3.905	6.440	3.515	6.025	3.124	5.609	2.734	5.194	2.344	4.695	1.875

HEATING MODE

ID DB°C	Outdoor WB°C												
	-9		-6		-5		6		12		15		18	
	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
15	3.278	3.278	3.710	3.710	3.854	3.854	5.438	5.438	6.302	6.302	6.735	6.735	7.167	7.167
17	3.192	3.192	3.680	3.680	3.770	3.770	5.432	5.432	6.228	6.228	6.662	6.662	7.096	7.096
19	3.106	3.106	3.649	3.649	3.686	3.686	5.425	5.425	6.154	6.154	6.589	6.589	7.025	7.025
21	3.020	3.020	3.573	3.573	3.603	3.603	5.358	5.358	6.080	6.080	6.517	6.517	6.954	6.954
23	2.934	2.934	3.450	3.450	3.519	3.519	5.229	5.229	6.005	6.005	6.444	6.444	6.883	6.883
25	2.848	2.848	3.327	3.327	3.435	3.435	5.101	5.101	5.931	5.931	6.371	6.371	6.812	6.812
27	2.762	2.762	3.204	3.204	3.352	3.352	4.973	4.973	5.857	5.857	6.299	6.299	6.741	6.741
	FROST REGION													

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R410A MODELS
(HEATPUMP)

MODEL : A5CM 20ER / A5LC 20CR (3 PHASE)

COOLING MODE

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	5.670	3.743	5.205	3.276	4.741	2.812	4.278	2.347	3.815	1.883	3.258	1.325
	16	5.833	3.471	5.392	3.044	4.951	2.617	4.511	2.190	4.071	1.763	3.543	1.251
24	16	5.833	4.580	5.392	4.153	4.951	3.726	4.511	3.299	4.071	2.872	3.543	2.360
	17	5.995	4.309	5.578	3.920	5.161	3.531	4.744	3.142	4.327	2.753	3.827	2.286
	18	6.157	4.037	5.764	3.686	5.370	3.335	4.977	2.984	4.584	2.633	4.111	2.212
	19	6.324	3.766	5.984	3.463	5.644	3.159	5.304	2.855	4.891	2.529	4.396	2.137
	20	6.473	3.482	6.091	3.155	5.710	2.828	5.328	2.501	4.946	2.174	4.488	1.782
28	18	6.157	5.146	5.764	4.795	5.370	4.444	4.977	4.093	4.584	3.742	4.111	3.321
	19	6.324	4.875	5.984	4.572	5.644	4.268	5.304	3.964	4.891	3.638	4.396	3.246
	20	6.473	4.591	6.091	4.264	5.710	3.937	5.328	3.610	4.946	3.283	4.488	2.891
	21	6.627	4.308	6.234	3.967	5.840	3.627	5.446	3.286	5.053	2.945	4.580	2.536
	22	6.782	4.025	6.376	3.671	5.971	3.316	5.565	2.961	5.159	2.607	4.673	2.181
	23	6.936	3.743	6.519	3.374	6.101	3.005	5.684	2.637	5.266	2.268	4.765	1.826
	24	7.091	3.460	6.661	3.077	6.232	2.695	5.802	2.312	5.373	1.930	4.857	1.471
30	20	6.473	5.145	6.091	4.818	5.710	4.492	5.328	4.165	4.946	3.838	4.488	3.446
	21	6.627	4.863	6.234	4.522	5.840	4.181	5.446	3.840	5.053	3.499	4.580	3.091
	22	6.782	4.580	6.376	4.225	5.971	3.870	5.565	3.516	5.159	3.161	4.673	2.735
	23	6.936	4.297	6.519	3.929	6.101	3.560	5.684	3.191	5.266	2.823	4.765	2.380
	24	7.091	4.014	6.661	3.632	6.232	3.249	5.802	2.867	5.373	2.484	4.857	2.025

HEATING MODE

ID DB°C	Outdoor WB°C												
	-9		-6		-5		6		12		15		18	
	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
15	3.326	3.326	3.764	3.764	3.910	3.910	5.518	5.518	6.394	6.394	6.833	6.833	7.271	7.271
17	3.238	3.238	3.712	3.712	3.823	3.823	5.511	5.511	6.306	6.306	6.745	6.745	7.183	7.183
19	3.151	3.151	3.660	3.660	3.735	3.735	5.504	5.504	6.218	6.218	6.656	6.656	7.094	7.094
21	3.064	3.064	3.578	3.578	3.648	3.648	5.428	5.428	6.130	6.130	6.568	6.568	7.006	7.006
23	2.977	2.977	3.465	3.465	3.561	3.561	5.282	5.282	6.042	6.042	6.480	6.480	6.918	6.918
25	2.890	2.890	3.353	3.353	3.473	3.473	5.136	5.136	5.954	5.954	6.392	6.392	6.829	6.829
27	2.803	2.803	3.240	3.240	3.386	3.386	4.991	4.991	5.866	5.866	6.303	6.303	6.741	6.741
	FROST REGION													

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R410A MODELS
(HEATPUMP)

MODEL : A5CM 25ER / A5LC 25CR (1 PHASE)

COOLING MODE

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	5.924	4.060	5.602	3.715	5.279	3.405	4.956	3.096	4.633	2.787	4.246	2.416
	16	6.138	3.823	5.810	3.519	5.481	3.233	5.153	2.947	4.824	2.662	4.430	2.319
24	16	6.138	4.870	5.810	4.566	5.481	4.281	5.153	3.995	4.824	3.710	4.430	3.367
	17	6.352	4.633	6.018	4.371	5.684	4.109	5.349	3.847	5.015	3.585	4.614	3.270
	18	6.567	4.378	6.227	4.146	5.886	3.915	5.546	3.683	5.206	3.452	4.798	3.174
	19	6.789	4.112	6.479	3.854	6.170	3.595	5.860	3.337	5.461	3.219	4.981	3.077
	20	6.993	3.855	6.626	3.616	6.260	3.378	5.893	3.140	5.526	2.901	5.086	2.615
28	18	6.567	5.426	6.227	5.194	5.886	4.963	5.546	4.731	5.206	4.499	4.798	4.221
	19	6.789	5.160	6.479	4.901	6.170	4.643	5.860	4.385	5.461	4.267	4.981	4.125
	20	6.993	4.903	6.626	4.664	6.260	4.426	5.893	4.187	5.526	3.949	5.086	3.663
	21	7.205	4.634	6.817	4.359	6.430	4.083	6.043	3.807	5.655	3.532	5.191	3.201
	22	7.416	4.366	7.008	4.053	6.600	3.740	6.193	3.427	5.785	3.114	5.295	2.739
	23	7.628	4.098	7.199	3.748	6.771	3.397	6.342	3.047	5.914	2.697	5.400	2.277
	24	7.839	3.829	7.390	3.442	6.941	3.055	6.492	2.667	6.043	2.280	5.504	1.815
30	20	6.993	5.427	6.626	5.188	6.260	4.950	5.893	4.711	5.526	4.473	5.086	4.187
	21	7.205	5.158	6.817	4.883	6.430	4.607	6.043	4.331	5.655	4.056	5.191	3.725
	22	7.416	4.890	7.008	4.577	6.600	4.264	6.193	3.951	5.785	3.638	5.295	3.263
	23	7.628	4.622	7.199	4.271	6.771	3.921	6.342	3.571	5.914	3.221	5.400	2.801
	24	7.839	4.353	7.390	3.966	6.941	3.578	6.492	3.191	6.043	2.804	5.504	2.339

HEATING MODE

ID DB°C	Outdoor WB°C												
	-9		-6		-5		6		12		15		18	
	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
15	3.898	3.898	4.412	4.412	4.583	4.583	6.467	6.467	7.495	7.495	8.009	8.009	8.523	8.523
17	3.796	3.796	4.347	4.347	4.488	4.488	6.459	6.459	7.431	7.431	7.950	7.950	8.470	8.470
19	3.694	3.694	4.282	4.282	4.393	4.393	6.452	6.452	7.367	7.367	7.892	7.892	8.417	8.417
21	3.591	3.591	4.190	4.190	4.298	4.298	6.387	6.387	7.304	7.304	7.834	7.834	8.364	8.364
23	3.489	3.489	4.071	4.071	4.204	4.204	6.264	6.264	7.240	7.240	7.776	7.776	8.312	8.312
25	3.387	3.387	3.951	3.951	4.109	4.109	6.142	6.142	7.176	7.176	7.718	7.718	8.259	8.259
27	3.285	3.285	3.832	3.832	4.014	4.014	6.019	6.019	7.113	7.113	7.659	7.659	8.206	8.206
	FROST REGION													

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R410A MODELS
(HEATPUMP)

MODEL : A5CM 25ER / A5LC 25CR (3 PHASE)

COOLING MODE

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	6.763	4.405	6.436	4.061	6.057	3.765	5.677	3.469	5.298	3.173	4.842	2.818
	16	6.992	4.182	6.649	3.879	6.279	3.600	5.910	3.321	5.540	3.042	5.097	2.708
24	16	6.992	5.341	6.649	5.038	6.279	4.759	5.910	4.480	5.540	4.201	5.097	3.867
	17	7.221	5.117	6.861	4.855	6.502	4.594	6.142	4.332	5.783	4.071	5.351	3.757
	18	7.474	4.871	7.115	4.635	6.755	4.400	6.396	4.164	6.037	3.929	5.606	3.646
	19	7.730	4.623	7.386	4.406	7.042	4.188	6.699	3.971	6.318	3.773	5.860	3.536
	20	7.975	4.363	7.592	4.103	7.209	3.842	6.826	3.582	6.443	3.322	5.984	3.009
28	18	7.474	6.030	7.115	5.794	6.755	5.559	6.396	5.323	6.037	5.088	5.606	4.805
	19	7.730	5.782	7.386	5.565	7.042	5.347	6.699	5.130	6.318	4.932	5.860	4.695
	20	7.975	5.522	7.592	5.262	7.209	5.001	6.826	4.741	6.443	4.481	5.984	4.168
	21	8.223	5.260	7.816	4.949	7.409	4.638	7.002	4.326	6.595	4.015	6.107	3.641
	22	8.471	4.999	8.040	4.636	7.609	4.274	7.178	3.912	6.747	3.549	6.230	3.115
	23	8.719	4.737	8.264	4.324	7.809	3.910	7.354	3.497	6.899	3.084	6.353	2.588
	24	8.967	4.476	8.488	4.011	8.009	3.547	7.530	3.082	7.051	2.618	6.476	2.061
30	20	7.975	6.101	7.592	5.841	7.209	5.581	6.826	5.321	6.443	5.060	5.984	4.748
	21	8.223	5.840	7.816	5.529	7.409	5.217	7.002	4.906	6.595	4.595	6.107	4.221
	22	8.471	5.578	8.040	5.216	7.609	4.854	7.178	4.491	6.747	4.129	6.230	3.694
	23	8.719	5.317	8.264	4.903	7.809	4.490	7.354	4.077	6.899	3.663	6.353	3.167
	24	8.967	5.055	8.488	4.591	8.009	4.126	7.530	3.662	7.051	3.198	6.476	2.640

HEATING MODE

ID DB°C	Outdoor WB°C												
	-9		-6		-5		6		12		15		18	
	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
15	4.110	4.110	4.652	4.652	4.833	4.833	6.820	6.820	7.904	7.904	8.446	8.446	8.987	8.987
17	4.003	4.003	4.538	4.538	4.724	4.724	6.812	6.812	7.790	7.790	8.331	8.331	8.872	8.872
19	3.895	3.895	4.424	4.424	4.615	4.615	6.804	6.804	7.676	7.676	8.216	8.216	8.756	8.756
21	3.787	3.787	4.315	4.315	4.506	4.506	6.706	6.706	7.562	7.562	8.102	8.102	8.641	8.641
23	3.679	3.679	4.210	4.210	4.397	4.397	6.520	6.520	7.448	7.448	7.987	7.987	8.525	8.525
25	3.572	3.572	4.105	4.105	4.288	4.288	6.334	6.334	7.335	7.335	7.872	7.872	8.410	8.410
27	3.464	3.464	4.001	4.001	4.180	4.180	6.147	6.147	7.221	7.221	7.758	7.758	8.294	8.294
	FROST REGION													

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R410A MODELS
(HEATPUMP)

MODEL : A5CM 28ER / A5LC 28CR

COOLING MODE

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	8.117	5.375	7.585	4.821	6.954	4.289	6.323	3.757	5.693	3.225	4.936	2.587
	16	8.318	5.027	7.780	4.527	7.192	4.039	6.605	3.550	6.018	3.061	5.314	2.475
24	16	8.318	6.369	7.780	5.869	7.192	5.381	6.605	4.892	6.018	4.404	5.314	3.817
	17	8.518	6.022	7.975	5.576	7.431	5.131	6.888	4.685	6.344	4.240	5.692	3.705
	18	8.764	5.664	8.246	5.265	7.728	4.867	7.210	4.469	6.691	4.071	6.070	3.593
	19	9.015	5.298	8.550	4.910	8.085	4.521	7.620	4.133	7.087	3.837	6.448	3.481
	20	9.246	4.931	8.734	4.549	8.222	4.167	7.710	3.785	7.198	3.403	6.583	2.944
28	18	8.764	7.006	8.246	6.607	7.728	6.209	7.210	5.811	6.691	5.413	6.070	4.935
	19	9.015	6.640	8.550	6.252	8.085	5.864	7.620	5.475	7.087	5.179	6.448	4.823
	20	9.246	6.273	8.734	5.891	8.222	5.509	7.710	5.127	7.198	4.745	6.583	4.286
	21	9.482	5.899	8.951	5.486	8.419	5.073	7.888	4.659	7.356	4.246	6.719	3.749
	22	9.719	5.526	9.168	5.081	8.617	4.636	8.066	4.191	7.515	3.746	6.854	3.213
	23	9.956	5.152	9.385	4.676	8.815	4.199	8.244	3.723	7.674	3.247	6.989	2.676
	24	10.192	4.778	9.602	4.270	9.012	3.763	8.423	3.256	7.833	2.748	7.125	2.139
30	20	9.246	6.944	8.734	6.562	8.222	6.180	7.710	5.798	7.198	5.416	6.583	4.957
	21	9.482	6.571	8.951	6.157	8.419	5.744	7.888	5.330	7.356	4.917	6.719	4.420
	22	9.719	6.197	9.168	5.752	8.617	5.307	8.066	4.862	7.515	4.417	6.854	3.884
	23	9.956	5.823	9.385	5.347	8.815	4.870	8.244	4.394	7.674	3.918	6.989	3.347
	24	10.192	5.449	9.602	4.941	9.012	4.434	8.423	3.927	7.833	3.419	7.125	2.810

HEATING MODE

ID DB°C	Outdoor WB°C												
	-9		-6		-5		6		12		15		18	
	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
15	4.695	4.695	5.314	5.314	5.520	5.520	7.790	7.790	9.028	9.028	9.647	9.647	10.266	10.266
17	4.572	4.572	5.287	5.287	5.408	5.408	7.781	7.781	8.961	8.961	9.589	9.589	10.216	10.216
19	4.449	4.449	5.260	5.260	5.296	5.296	7.771	7.771	8.895	8.895	9.530	9.530	10.165	10.165
21	4.326	4.326	5.157	5.157	5.184	5.184	7.699	7.699	8.829	8.829	9.472	9.472	10.115	10.115
23	4.203	4.203	4.980	4.980	5.071	5.071	7.564	7.564	8.762	8.762	9.414	9.414	10.065	10.065
25	4.080	4.080	4.802	4.802	4.959	4.959	7.429	7.429	8.696	8.696	9.356	9.356	10.015	10.015
27	3.957	3.957	4.624	4.624	4.847	4.847	7.295	7.295	8.630	8.630	9.297	9.297	9.965	9.965
	FROST REGION													

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R410A MODELS
(HEATPUMP)

MODEL : A5CM 28ER / A5LC 35CR

COOLING MODE

ID DB°C	ID WB°C	Outdoor DB°C											
		20		25		30		35		40		46	
		TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
20	15	8.685	5.958	8.373	5.617	8.022	5.364	7.670	5.111	7.318	4.858	6.897	4.555
	16	9.015	5.683	8.659	5.401	8.283	5.162	7.907	4.923	7.531	4.684	7.079	4.398
24	16	9.015	7.025	8.659	6.743	8.283	6.504	7.907	6.265	7.531	6.026	7.079	5.740
	17	9.345	6.751	8.944	6.526	8.544	6.302	8.143	6.077	7.743	5.852	7.262	5.583
	18	9.693	6.435	9.261	6.241	8.828	6.047	8.396	5.853	7.964	5.659	7.445	5.426
	19	10.051	6.097	9.634	5.821	9.218	5.546	8.801	5.271	8.268	5.270	7.628	5.269
	20	10.389	5.781	9.889	5.539	9.389	5.296	8.888	5.053	8.388	4.810	7.788	4.519
28	18	9.693	7.777	9.261	7.583	8.828	7.389	8.396	7.195	7.964	7.001	7.445	6.768
	19	10.051	7.439	9.634	7.163	9.218	6.888	8.801	6.613	8.268	6.612	7.628	6.611
	20	10.389	7.123	9.889	6.881	9.389	6.638	8.888	6.395	8.388	6.152	7.788	5.861
	21	10.737	6.786	10.200	6.463	9.664	6.141	9.128	5.819	8.592	5.497	7.948	5.110
	22	11.084	6.448	10.512	6.046	9.940	5.645	9.367	5.243	8.795	4.842	8.108	4.360
	23	11.432	6.110	10.823	5.629	10.215	5.148	9.607	4.667	8.998	4.186	8.269	3.609
	24	11.779	5.772	11.135	5.212	10.491	4.652	9.846	4.091	9.202	3.531	8.429	2.858
30	20	10.389	7.794	9.889	7.552	9.389	7.309	8.888	7.066	8.388	6.823	7.788	6.532
	21	10.737	7.457	10.200	7.135	9.664	6.812	9.128	6.490	8.592	6.168	7.948	5.781
	22	11.084	7.119	10.512	6.717	9.940	6.316	9.367	5.914	8.795	5.513	8.108	5.031
	23	11.432	6.781	10.823	6.300	10.215	5.819	9.607	5.338	8.998	4.857	8.269	4.280
	24	11.779	6.444	11.135	5.883	10.491	5.323	9.846	4.762	9.202	4.202	8.429	3.529

HEATING MODE

ID DB°C	Outdoor WB°C												
	-9		-6		-5		6		12		15		18	
	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)	TC(kW)	SC(kW)
15	5.492	5.492	6.217	6.217	6.458	6.458	9.113	9.113	10.561	10.561	11.285	11.285	12.009	12.009
17	5.348	5.348	6.075	6.075	6.285	6.285	9.102	9.102	10.264	10.264	10.966	10.966	11.668	11.668
19	5.204	5.204	5.933	5.933	6.112	6.112	9.091	9.091	9.967	9.967	10.647	10.647	11.328	11.328
21	5.061	5.061	5.770	5.770	5.938	5.938	8.872	8.872	9.670	9.670	10.328	10.328	10.987	10.987
23	4.917	4.917	5.587	5.587	5.765	5.765	8.446	8.446	9.373	9.373	10.010	10.010	10.646	10.646
25	4.773	4.773	5.404	5.404	5.592	5.592	8.020	8.020	9.076	9.076	9.691	9.691	10.306	10.306
27	4.629	4.629	5.221	5.221	5.419	5.419	7.593	7.593	8.779	8.779	9.372	9.372	9.965	9.965
	FROST REGION													

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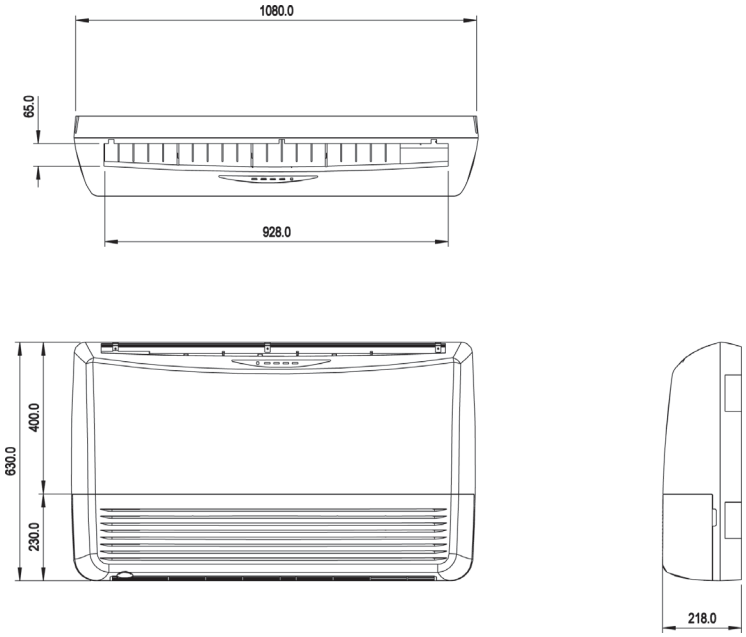
7. DIMENSIONAL DATA

INDOOR UNIT

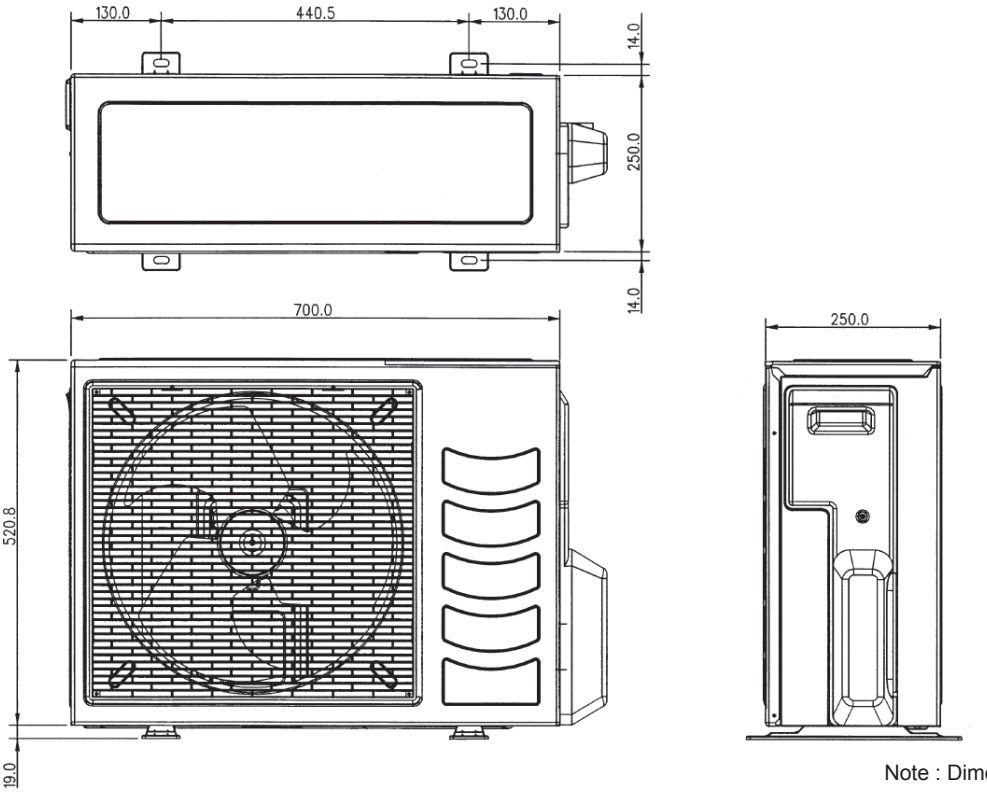
ACM 15/20/25/28E/ER
A5CM 15/20/25/28E/ER



Note : Dimension in mm

OUTDOOR UNIT

ALC / A5LC 15 C/CR



Note : Dimension in mm

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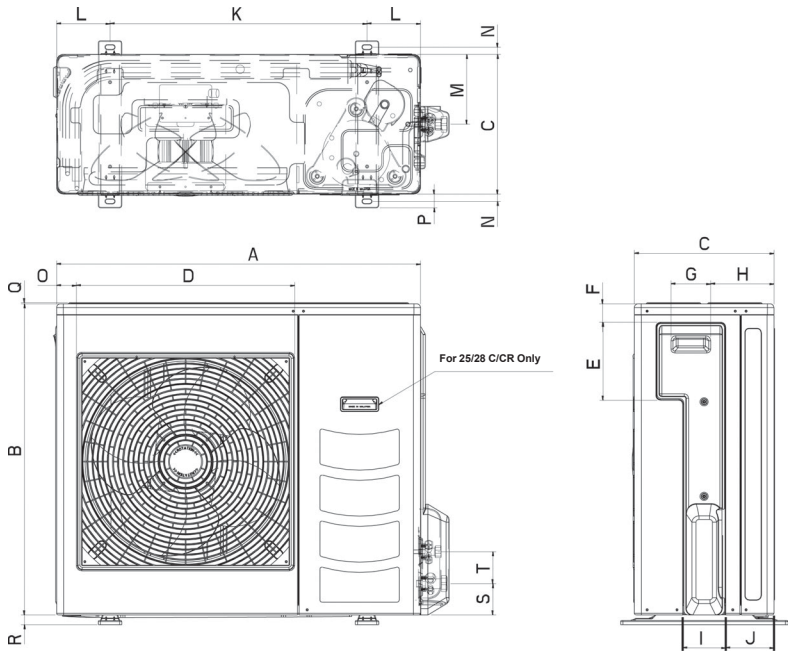
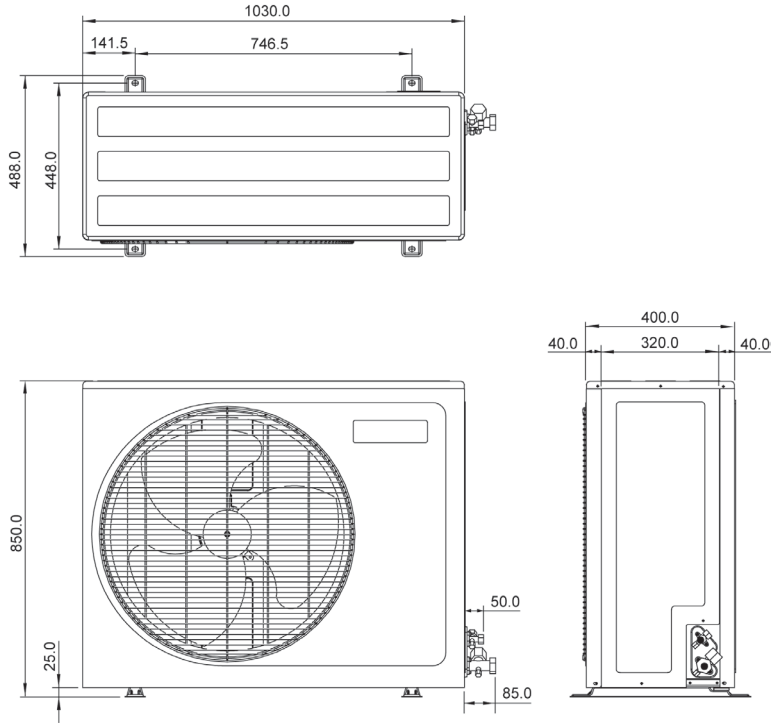
ALC 18C/CR
ALC 20/25/28C/CR
A5LC 20/25/28C/CR



MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
ALC 18C, ALC/A5LC 20C/CR	855	628	328	508	181	44	93	149	101	113	603	126	164	17	49	32	3	23	73	75
ALC / A5LC 25/28 C/CR	855	730	328	513	182	44	93	149	101	113	603	126	164	17	47	32	3	23	73	75

Note : Dimension in mm

ALC 30C/CR
A5LC 35C/CR



Note : Dimension in mm

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8. ELECTRICAL DATA

ELECTRICAL DATA - COOLING ONLY (R22)

MODEL	INDOOR UNIT		ACM 15E
	OUTDOOR UNIT		ALC 15C
INDOOR MOTOR	INSULATION GRADE		CLASS B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	RATED INPUT POWER	W	79
	RATED RUNNING CURRENT	A	0.34
	MOTOR OUTPUT	W	50
	POLES		6
OUTDOOR MOTOR	INSULATION GRADE		CLASS B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	RATED INPUT POWER	W	59
	RATED RUNNING CURRENT	A	0.26
	MOTOR OUTPUT	W	35
	POLES		6
COMPRESSOR	INSULATION GRADE		CLASS E
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	CAPACITOR	mF	30.0
	RATED INPUT POWER	W	1112
	RATED RUNNING CURRENT	A	5.0
	LOCKED ROTOR AMP.	A	21

MODEL	INDOOR UNIT		ACM 20E	
	OUTDOOR UNIT		ALC 18C	ALC 20C
INDOOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	101	
	RATED RUNNING CURRENT	A	0.46	
	MOTOR OUTPUT	W	50	
	POLES		4	
OUTDOOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	120	120
	RATED RUNNING CURRENT	A	0.53	0.53
	MOTOR OUTPUT	W	64	64
	POLES		6	6
COMPRESSOR	INSULATION GRADE		CLASS E	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	CAPACITOR	mF	60.0	60.0
	RATED INPUT POWER	W	1653	1640
	RATED RUNNING CURRENT	A	7.4	7.0
	LOCKED ROTOR AMP.	A	32	32

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ELECTRICAL DATA - COOLING ONLY (R22)

MODEL	INDOOR UNIT		ACM 25E
	OUTDOOR UNIT		ALC 25C
INDOOR MOTOR	INSULATION GRADE		CLASS B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	RATED INPUT POWER	W	109
	RATED RUNNING CURRENT	A	0.49
	MOTOR OUTPUT	W	65
	POLES		4
OUTDOOR MOTOR	INSULATION GRADE		CLASS B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	RATED INPUT POWER	W	132
	RATED RUNNING CURRENT	A	0.58
	MOTOR OUTPUT	W	64
	POLES		6
COMPRESSOR	INSULATION GRADE		CLASS E
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	CAPACITOR	mF	45.0
	RATED INPUT POWER	W	2222
	RATED RUNNING CURRENT	A	11.0
	LOCKED ROTOR AMP.	A	54

MODEL	INDOOR UNIT		ACM 28E	
	OUTDOOR UNIT		ALC 28C	ALC 30C
INDOOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	150	
	RATED RUNNING CURRENT	A	0.75	
	MOTOR OUTPUT	W	70	
	POLES		4	
OUTDOOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	142	220
	RATED RUNNING CURRENT	A	0.62	1.02
	MOTOR OUTPUT	W	75	145
	POLES		6	8
COMPRESSOR	INSULATION GRADE		CLASS E	-
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	CAPACITOR	mF	50.0	50.0
	RATED INPUT POWER	W	2519	2377
	RATED RUNNING CURRENT	A	12.2	11.5
	LOCKED ROTOR AMP.	A	66	82

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ELECTRICAL DATA - HEATPUMP (R22)

MODEL	INDOOR UNIT		ACM 15ER
	OUTDOOR UNIT		ALC 15CR
INDOOR MOTOR	INSULATION GRADE		CLASS B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	RATED INPUT POWER	W	79
	RATED RUNNING CURRENT	A	0.34
	MOTOR OUTPUT	W	50
	POLES		6
OUTDOOR MOTOR	INSULATION GRADE		CLASS B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	RATED INPUT POWER	W	59
	RATED RUNNING CURRENT	A	0.26
	MOTOR OUTPUT	W	35
	POLES		6
COMPRESSOR	INSULATION GRADE		CLASS E
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	CAPACITOR	mF	35.0
	RATED INPUT POWER (COOLING)	W	1150
	RATED INPUT POWER (HEATING)	W	860
	RATED RUNNING CURRENT (COOLING)	A	5.2
	RATED RUNNING CURRENT (HEATING)	A	3.9
	LOCKED ROTOR AMP.	A	24

MODEL	INDOOR UNIT		ACM 20ER	
	OUTDOOR UNIT		ALC 18CR	ALC 20CR
INDOOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	101	
	RATED RUNNING CURRENT	A	0.46	
	MOTOR OUTPUT	W	50	
	POLES		4	
OUTDOOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	120	117
	RATED RUNNING CURRENT	A	0.53	0.51
	MOTOR OUTPUT	W	64	64
	POLES		6	6
COMPRESSOR	INSULATION GRADE		CLASS E	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	CAPACITOR	mF	60.0	45.0
	RATED INPUT POWER (COOLING)	W	1649	1522
	RATED INPUT POWER (HEATING)	W	1489	1512
	RATED RUNNING CURRENT (COOLING)	A	7.4	6.7
	RATED RUNNING CURRENT (HEATING)	A	7.6	7.0
	LOCKED ROTOR AMP.	A	32	47

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ELECTRICAL DATA - HEATPUMP (R22)

MODEL	INDOOR UNIT		ACM 25ER
	OUTDOOR UNIT		ALC 25CR
INDOOR MOTOR	INSULATION GRADE		CLASS B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	RATED INPUT POWER	W	109
	RATED RUNNING CURRENT	A	0.49
	MOTOR OUTPUT	W	65
	POLES		4
OUTDOOR MOTOR	INSULATION GRADE		CLASS B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	RATED INPUT POWER	W	132
	RATED RUNNING CURRENT	A	0.58
	MOTOR OUTPUT	W	64
	POLES		6
COMPRESSOR	INSULATION GRADE		CLASS E
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	CAPACITOR	mF	45.0
	RATED INPUT POWER (COOLING)	W	2222
	RATED INPUT POWER (HEATING)	W	2062
	RATED RUNNING CURRENT (COOLING)	A	11.0
	RATED RUNNING CURRENT (HEATING)	A	10.6
	LOCKED ROTOR AMP.	A	54

MODEL	INDOOR UNIT		ACM 28ER	
	OUTDOOR UNIT		ALC 28CR	ALC 30CR
INDOOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	150	
	RATED RUNNING CURRENT	A	0.75	
	MOTOR OUTPUT	W	70	
	POLES		4	
OUTDOOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	142	220
	RATED RUNNING CURRENT	A	0.62	1.02
	MOTOR OUTPUT	W	75	145
	POLES		6	8
COMPRESSOR	INSULATION GRADE		CLASS E	-
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	CAPACITOR	mF	50.0	50.0
	RATED INPUT POWER (COOLING)	W	2570	2377
	RATED INPUT POWER (HEATING)	W	2610	2584
	RATED RUNNING CURRENT (COOLING)	A	12.3	11.5
	RATED RUNNING CURRENT (HEATING)	A	12.4	12.3
	LOCKED ROTOR AMP.	A	66	82

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ELECTRICAL DATA - COOLING ONLY (R410A)

MODEL	INDOOR UNIT		A5CM 15E
	OUTDOOR UNIT		A5LC 15C
INDOOR MOTOR	INSULATION GRADE		CLASS B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	RATED INPUT POWER	W	79
	RATED RUNNING CURRENT	A	0.34
	MOTOR OUTPUT	W	26
	POLES		6
OUTDOOR MOTOR	INSULATION GRADE		CLASS B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	RATED INPUT POWER	W	59
	RATED RUNNING CURRENT	A	0.26
	MOTOR OUTPUT	W	35
	POLES		6
COMPRESSOR	INSULATION GRADE		CLASS E
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	CAPACITOR	mF	35.0
	RATED INPUT POWER	W	1130
	RATED RUNNING CURRENT	A	5.4
	LOCKED ROTOR AMP.	A	24

MODEL	INDOOR UNIT		A5CM 20E	A5CM 25E
	OUTDOOR UNIT		A5LC 20C	A5LC 25C
INDOOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	101	109
	RATED RUNNING CURRENT	A	0.46	0.49
	MOTOR OUTPUT	W	50	65
	POLES		4	4
OUTDOOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	120	132
	RATED RUNNING CURRENT	A	0.53	0.58
	MOTOR OUTPUT	W	64	64
	POLES		6	6
COMPRESSOR	INSULATION GRADE		CLASS E	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50 / <380 - 415 / 3 / 50>	
	CAPACITOR	mF	50.0 / <NIL>	50.0 / <NIL>
	RATED INPUT POWER	W	1502 / <1536>	1732 / <1990>
	RATED RUNNING CURRENT	A	6.6 / <3.0>	7.8 / <3.8>
	LOCKED ROTOR AMP.	A	27 / <19>	63 / <26>

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ELECTRICAL DATA - COOLING ONLY (R410A)

MODEL	INDOOR UNIT		A5CM 28E	
	OUTDOOR UNIT		A5LC 28C	A5LC 35C
INDOOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	150	
	RATED RUNNING CURRENT	A	0.75	
	MOTOR OUTPUT	W	70	
	POLES		4	
OUTDOOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	142	220
	RATED RUNNING CURRENT	A	0.62	1.06
	MOTOR OUTPUT	W	75	145
	POLES		6	8
COMPRESSOR	INSULATION GRADE		CLASS E	-
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50 / <380 - 415 / 3 / 50>	
	CAPACITOR	mF	45.0 / <NIL>	60.0 / <NIL>
	RATED INPUT POWER	W	2378 / <2423>	2547 / <2447>
	RATED RUNNING CURRENT	A	11.30 / <4.29>	12.70 / <3.01>
	LOCKED ROTOR AMP.	A	65 / <26>	97 / <7>

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ELECTRICAL DATA - HEATPUMP (R410A)

MODEL	INDOOR UNIT		A5CM 15ER
	OUTDOOR UNIT		A5LC 15CR
INDOOR MOTOR	INSULATION GRADE		CLASS B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	RATED INPUT POWER	W	79
	RATED RUNNING CURRENT	A	0.34
	MOTOR OUTPUT	W	50
	POLES		6
OUTDOOR MOTOR	INSULATION GRADE		CLASS B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	RATED INPUT POWER	W	59
	RATED RUNNING CURRENT	A	0.26
	MOTOR OUTPUT	W	35
	POLES		6
COMPRESSOR	INSULATION GRADE		CLASS E
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	CAPACITOR	mF	35.0
	RATED INPUT POWER (COOLING)	W	1130
	RATED INPUT POWER (HEATING)	W	1000
	RATED RUNNING CURRENT (COOLING)	A	5.4
	RATED RUNNING CURRENT (HEATING)	A	4.5
	LOCKED ROTOR AMP.	A	24

MODEL	INDOOR UNIT		A5CM 20ER	A5CM 25ER
	OUTDOOR UNIT		A5LC 20CR	A5LC 25CR
INDOOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	101	109
	RATED RUNNING CURRENT	A	0.46	0.49
	MOTOR OUTPUT	W	50	65
	POLES		4	4
OUTDOOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	120	132
	RATED RUNNING CURRENT	A	0.53	0.58
	MOTOR OUTPUT	W	64	64
	POLES		6	6
COMPRESSOR	INSULATION GRADE		CLASS E	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50 / <380 - 415 / 3 / 50>	
	CAPACITOR	mF	50.0 / <NIL>	50.0 / <NIL>
	RATED INPUT POWER (COOLING)	W	1502 / <1536>	1732 / <1990>
	RATED INPUT POWER (HEATING)	W	1272 / <1306>	1762 / <1883>
	RATED RUNNING CURRENT (COOLING)	A	6.6 / <3.0>	7.8 / <3.8>
	RATED RUNNING CURRENT (HEATING)	A	5.6 / <2.5>	8.0 / <3.6>
	LOCKED ROTOR AMP.	A	27 / <19>	63 / <26>

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ELECTRICAL DATA - HEATPUMP (R410A)

MODEL	INDOOR UNIT		A5CM 28ER	
	OUTDOOR UNIT		A5LC 28CR	A5LC 35CR
INDOOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	150	
	RATED RUNNING CURRENT	A	0.75	
	MOTOR OUTPUT	W	70	
	POLES		4	
OUTDOOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	142	220
	RATED RUNNING CURRENT	A	0.62	1.06
	MOTOR OUTPUT	W	75	145
	POLES		6	8
COMPRESSOR	INSULATION GRADE		CLASS E	-
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50 / <380 - 415 / 3 / 50>	
	CAPACITOR	mF	45.0 / <NIL>	60.0 / <NIL>
	RATED INPUT POWER (COOLING)	W	2378 / <2423>	2547 / <2447>
	RATED INPUT POWER (HEATING)	W	2128 / <2086>	2407 / <2297>
	RATED RUNNING CURRENT (COOLING)	A	11.30 / <4.29>	12.70 / <3.01>
	RATED RUNNING CURRENT (HEATING)	A	10.30 / <3.89>	11.80 / <2.81>
	LOCKED ROTOR AMP.	A	65 / <26>	97 / <7>

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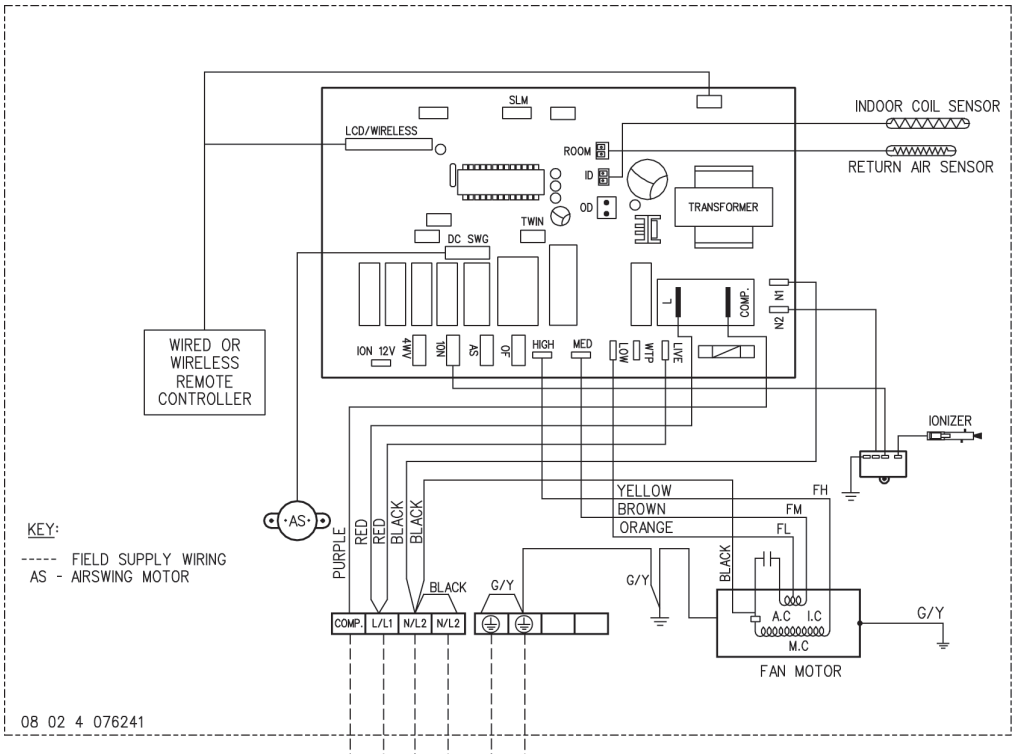
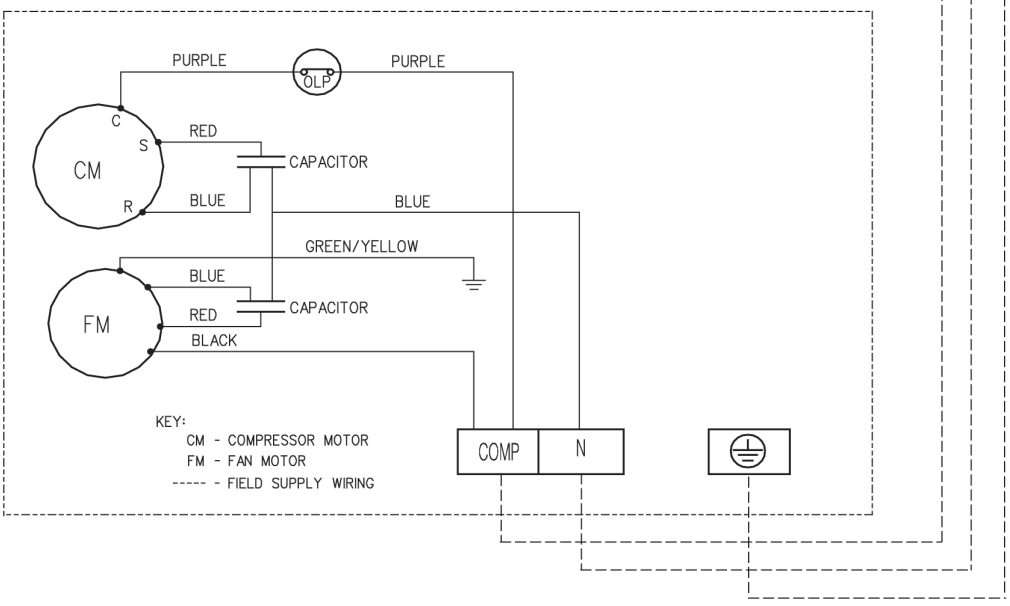
9. WIRING DIAGRAMS

COOLING ONLY

INDOOR UNIT
MODEL: ACM / A5CM 15E



OUTDOOR UNIT
MODEL: ALC / A5LC 15C



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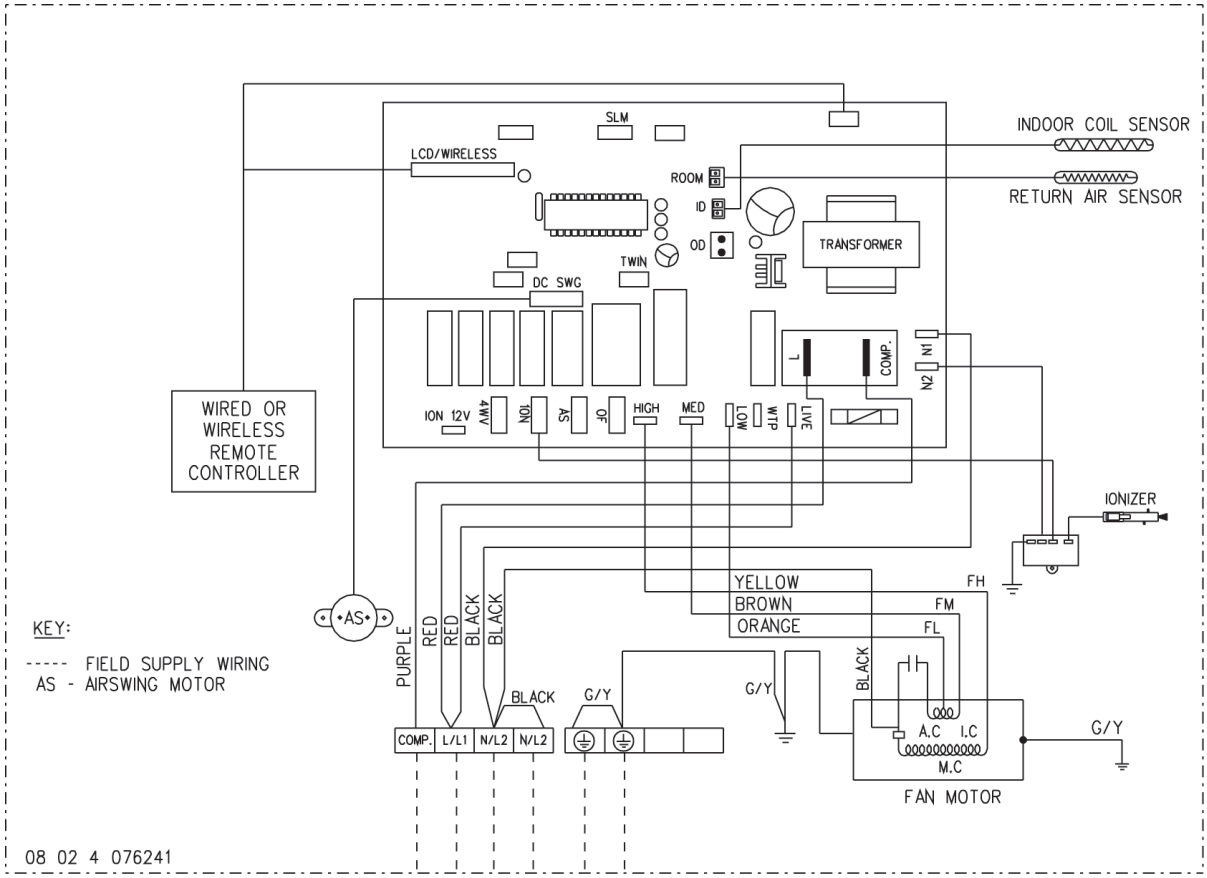
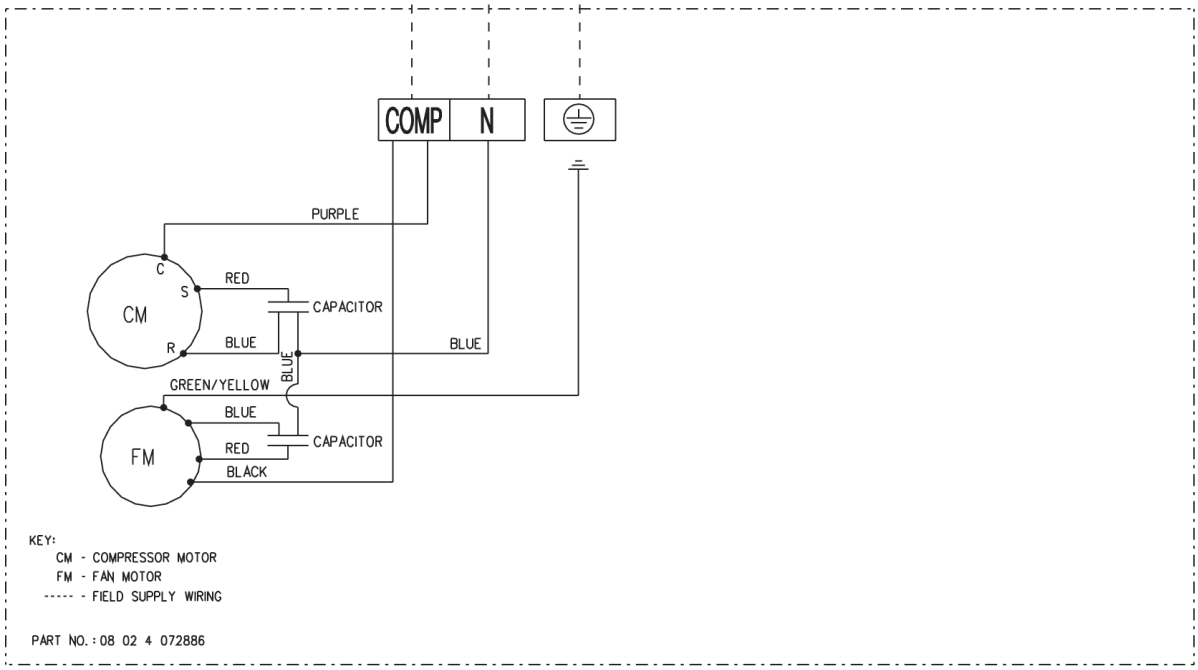
INDOOR UNIT
MODEL: ACM / A5CM 20/25E



E 1PHASE
N/L2 220/240VAC 50Hz OR
L 208/230 VAC 60Hz

OUTDOOR UNIT
MODEL: ALC 18C
ALC / A5LC 20/25C



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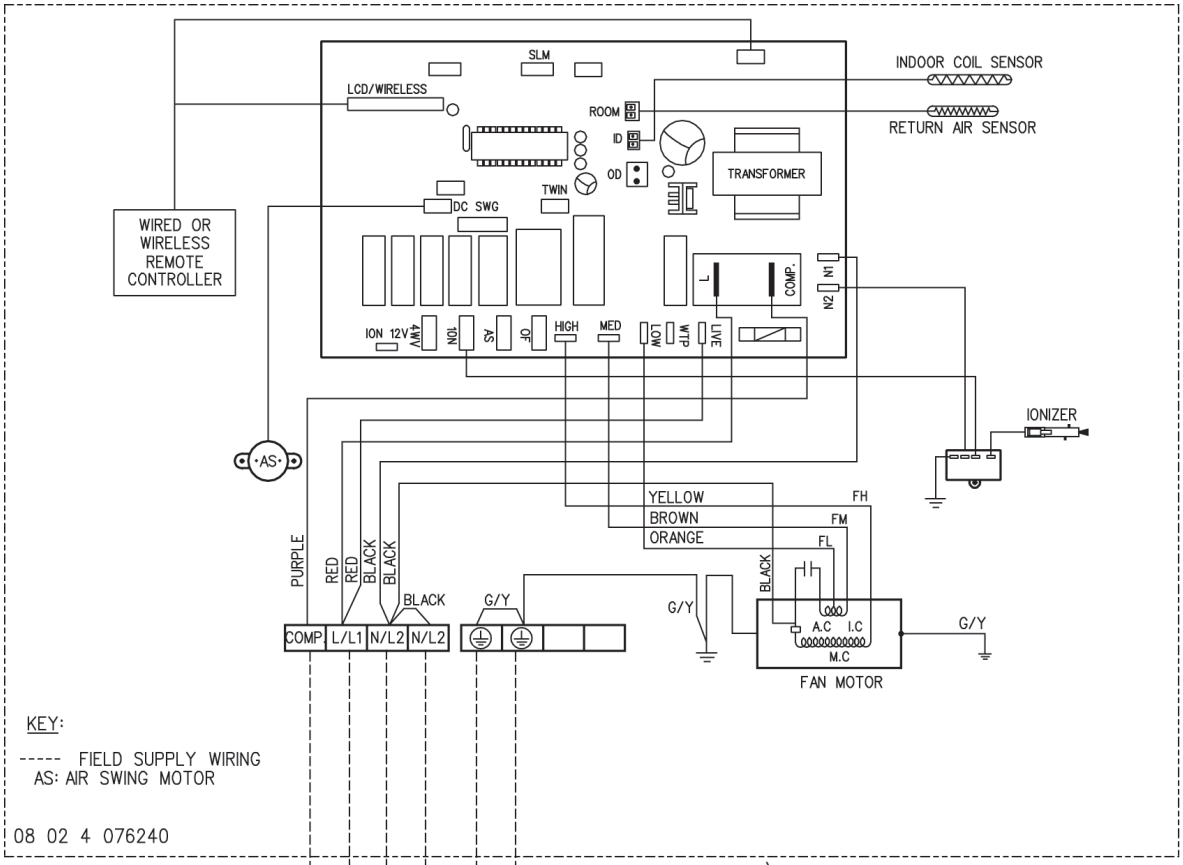
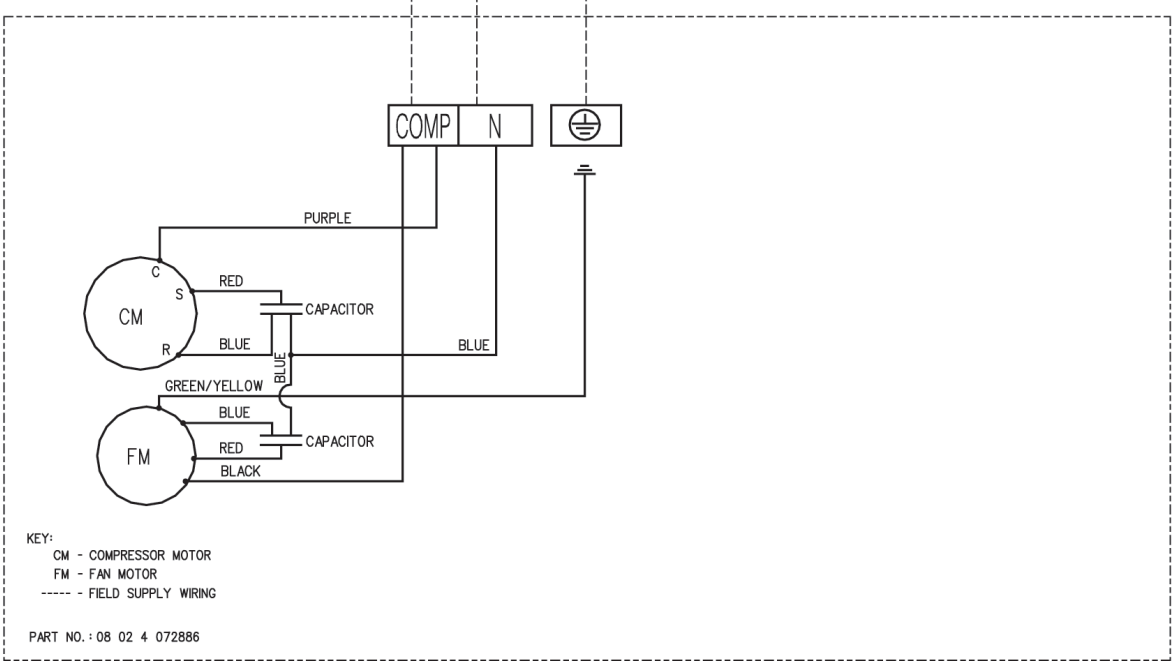
INDOOR UNIT
MODEL: ACM / A5CM 28E



OUTDOOR UNIT
MODEL: ALC / A5LC 28C



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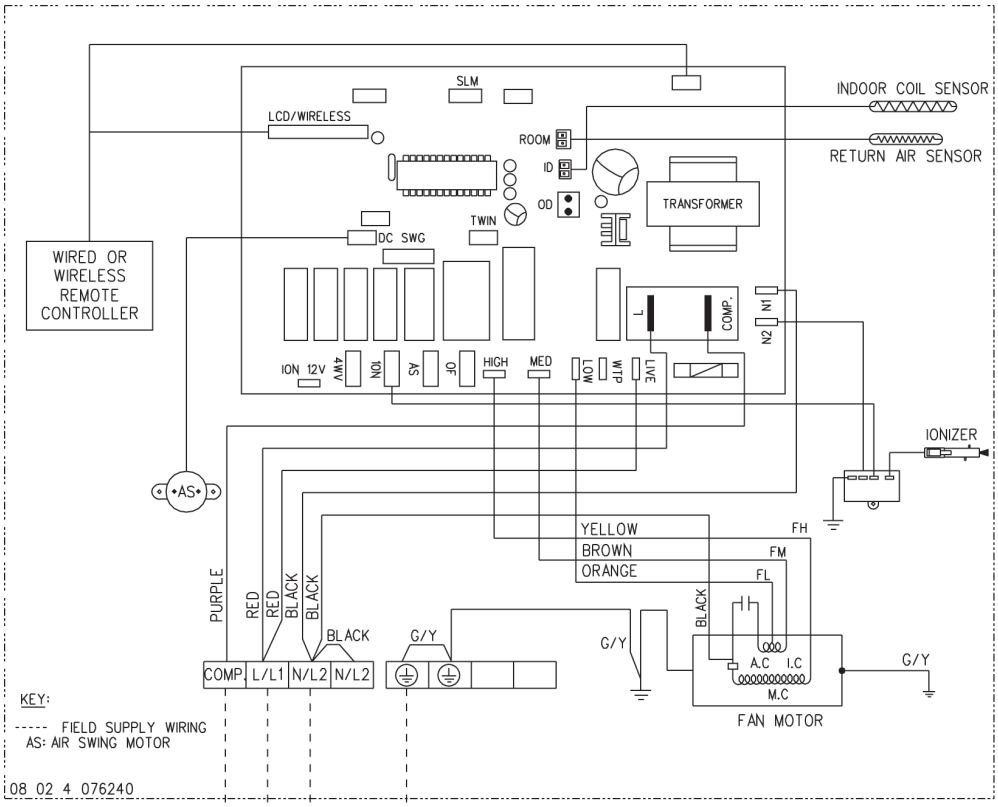
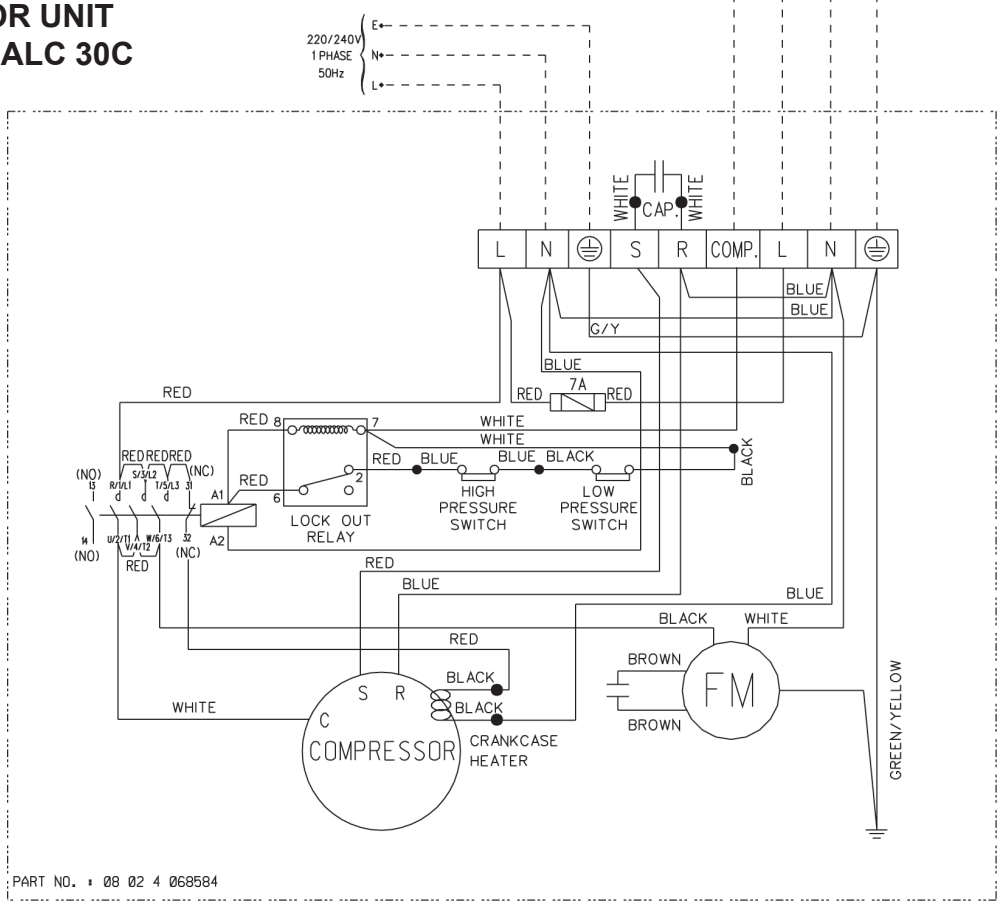
INDOOR UNIT
MODEL: ACM 28E



OUTDOOR UNIT
MODEL: ALC 30C



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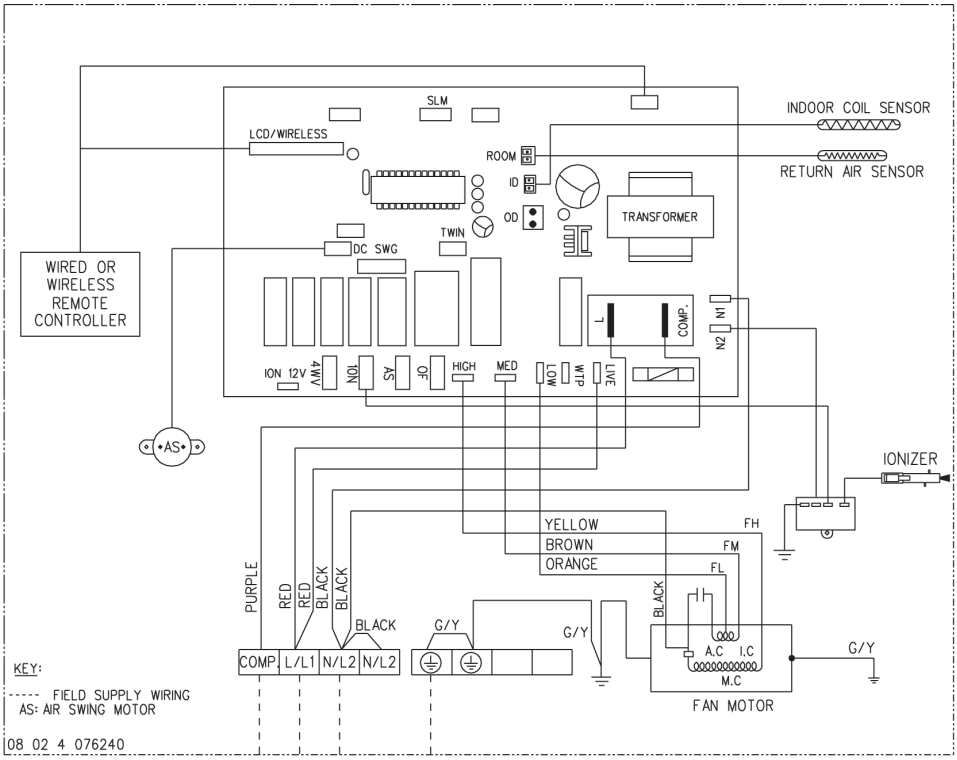
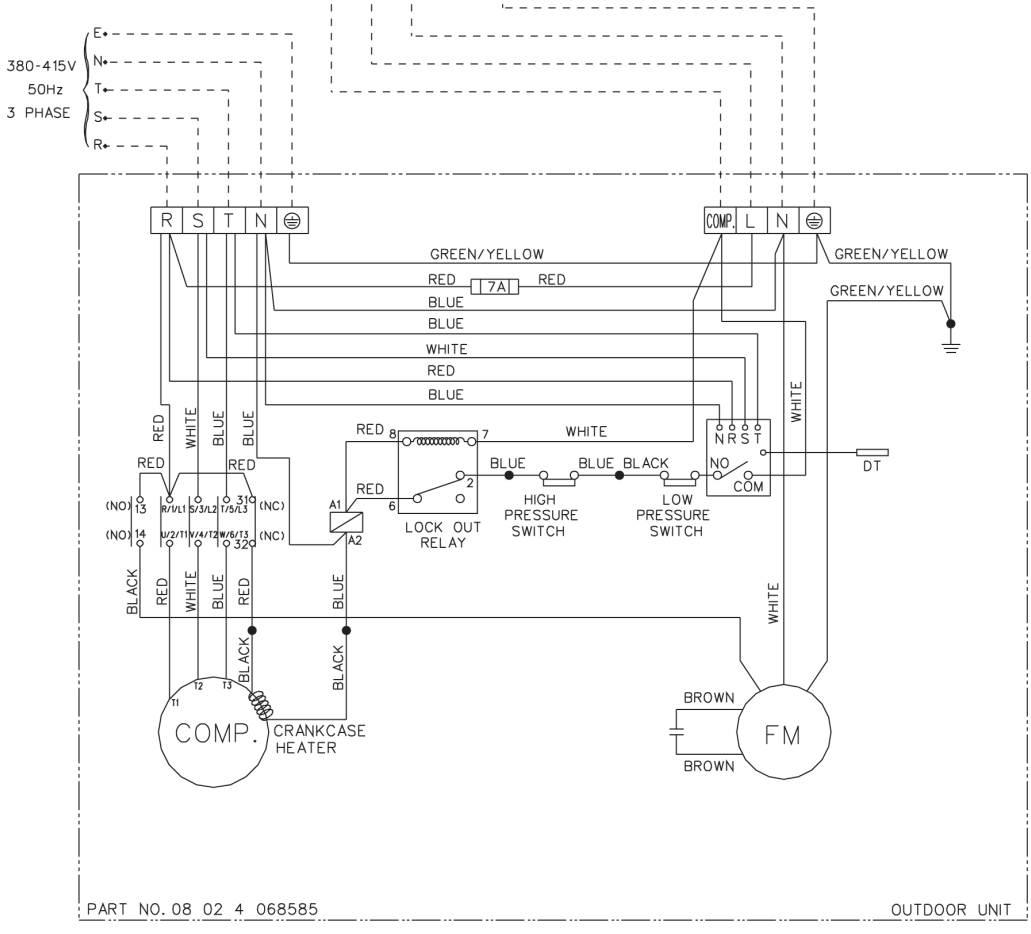
INDOOR UNIT
MODEL: A5CM 28E





OUTDOOR UNIT
MODEL: A5LC 35C

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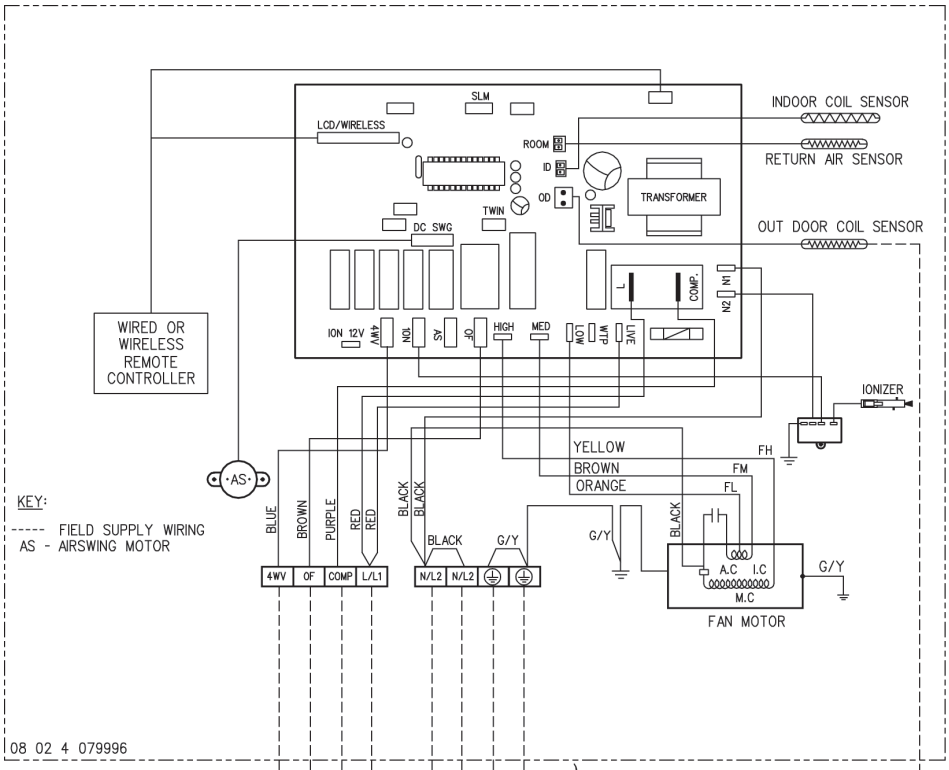
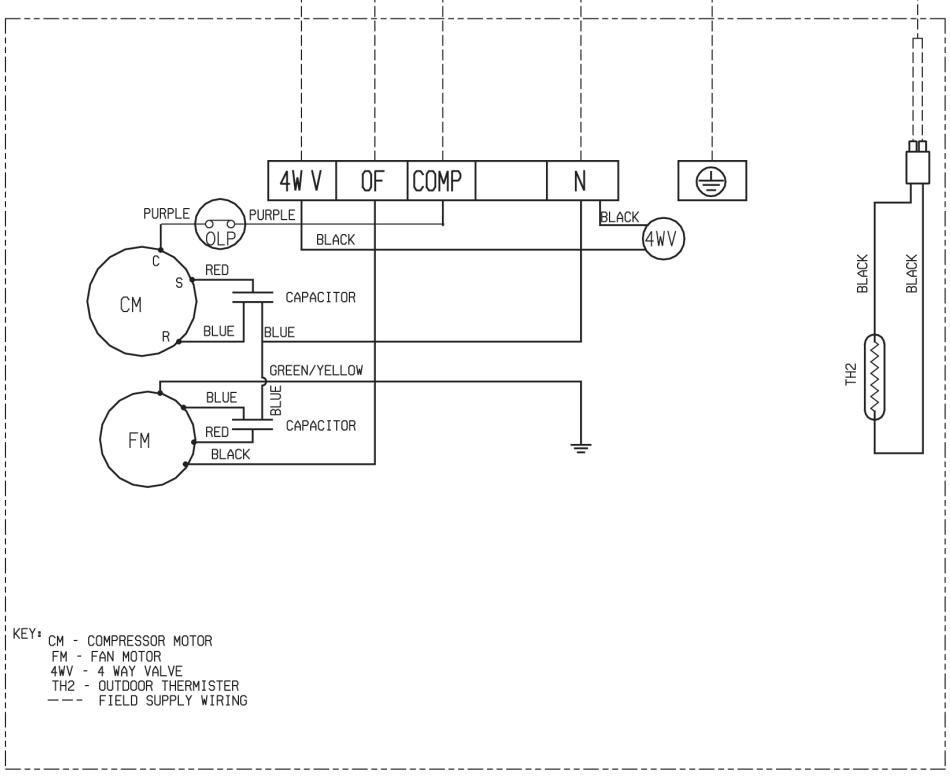
HEATPUMP

INDOOR UNIT
MODEL: ACM / A5CM 15ER



OUTDOOR
MODEL: ALC / A5LC 15CR



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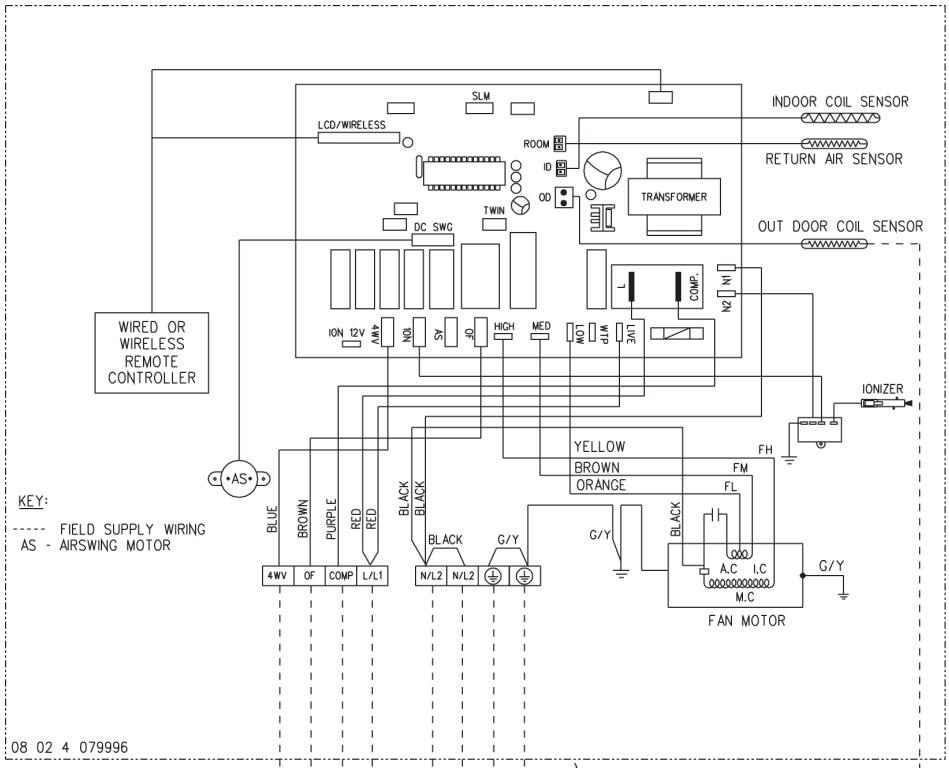
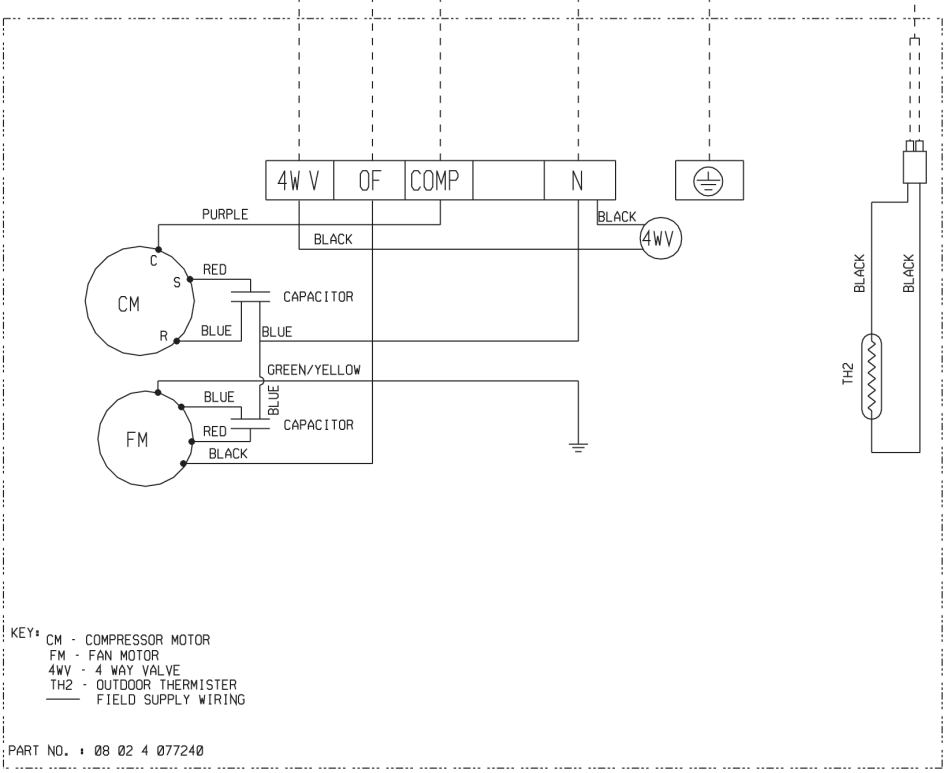
INDOOR UNIT
MODEL: ACM / A5CM 20/25ER



OUTDOOR
MODEL: ALC 18CR
ALC / A5LC 20/25CR



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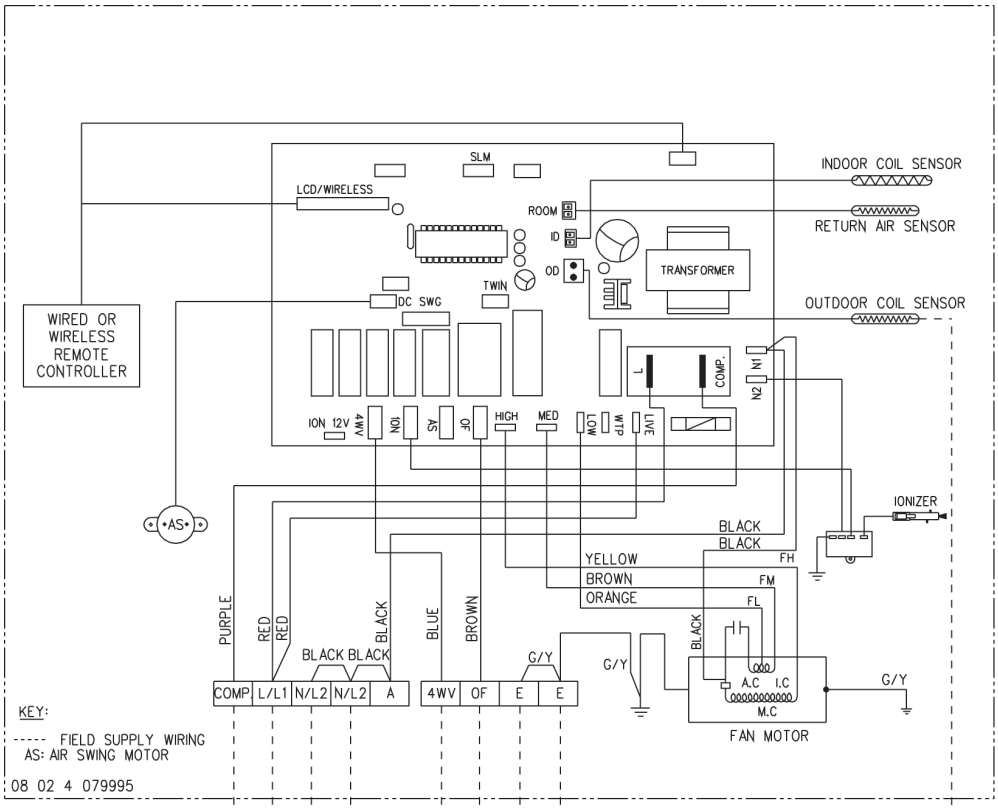
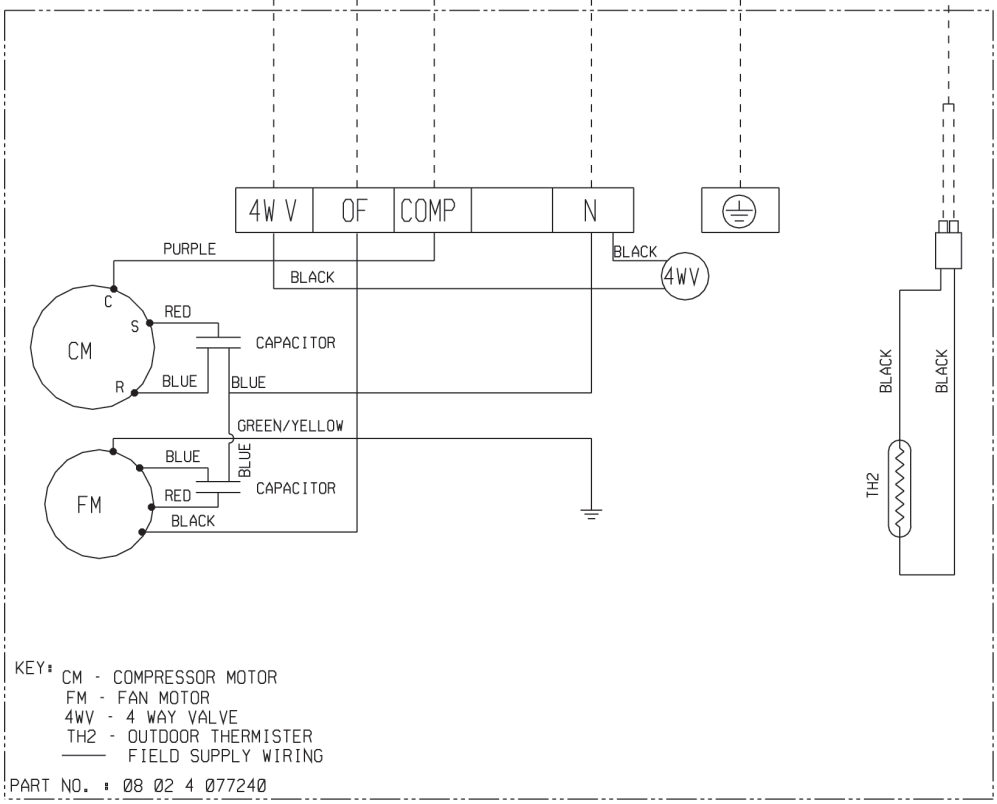
INDOOR UNIT
MODEL: ACM / A5CM 28ER



OUTDOOR UNIT
MODEL: ALC / A5LC 28CR



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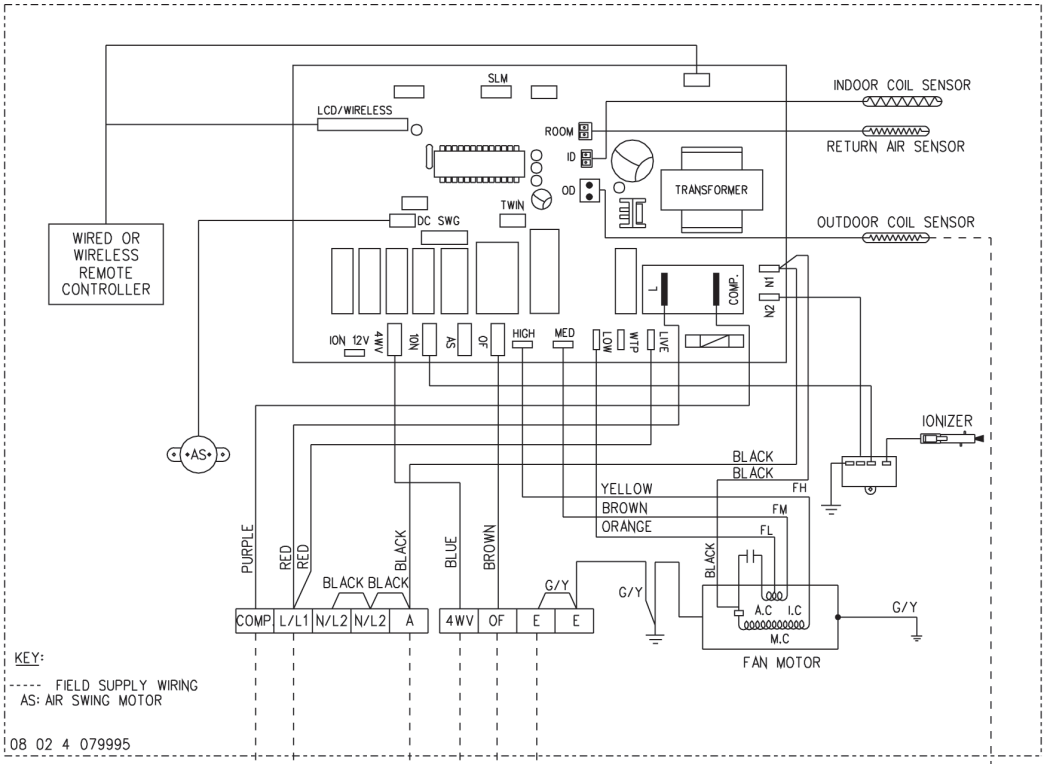
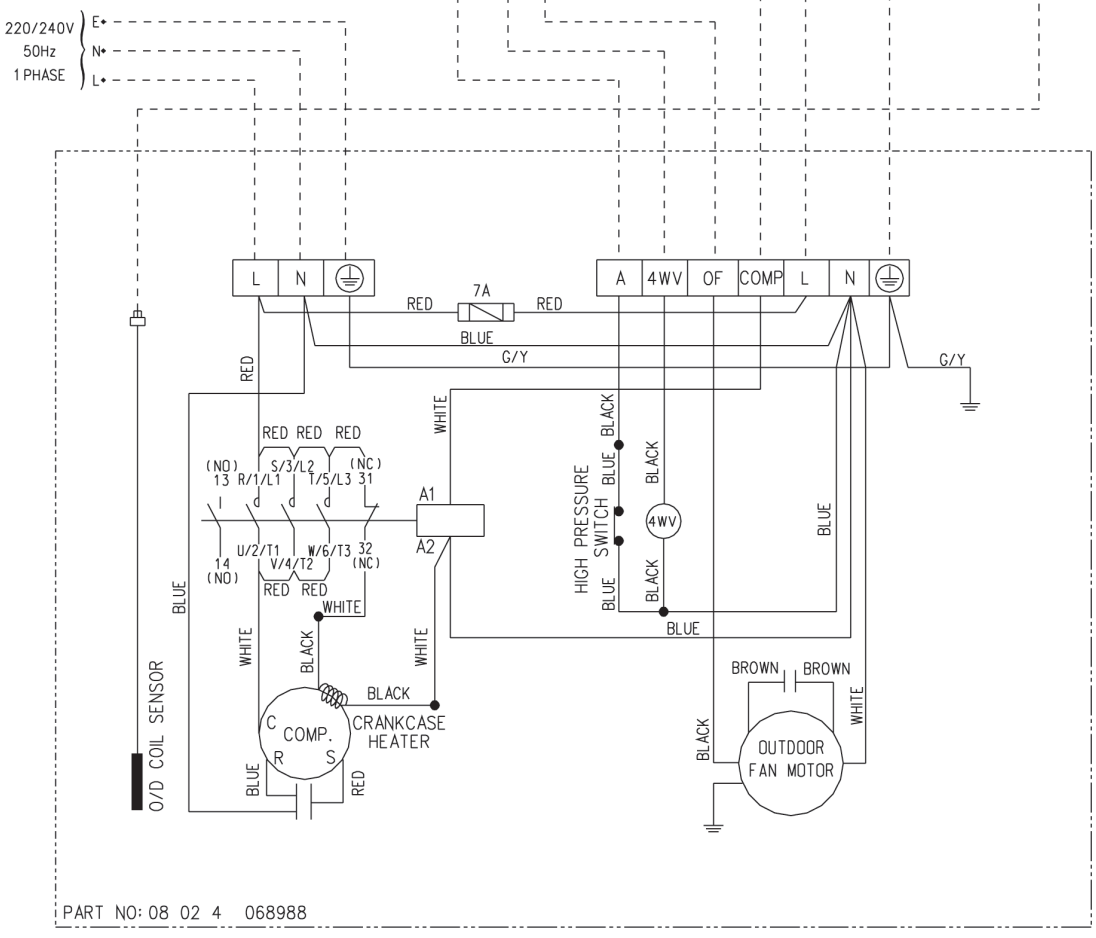
INDOOR UNIT
MODEL: ACM 28ER



OUTDOOR UNIT
MODEL: ALC 30CR



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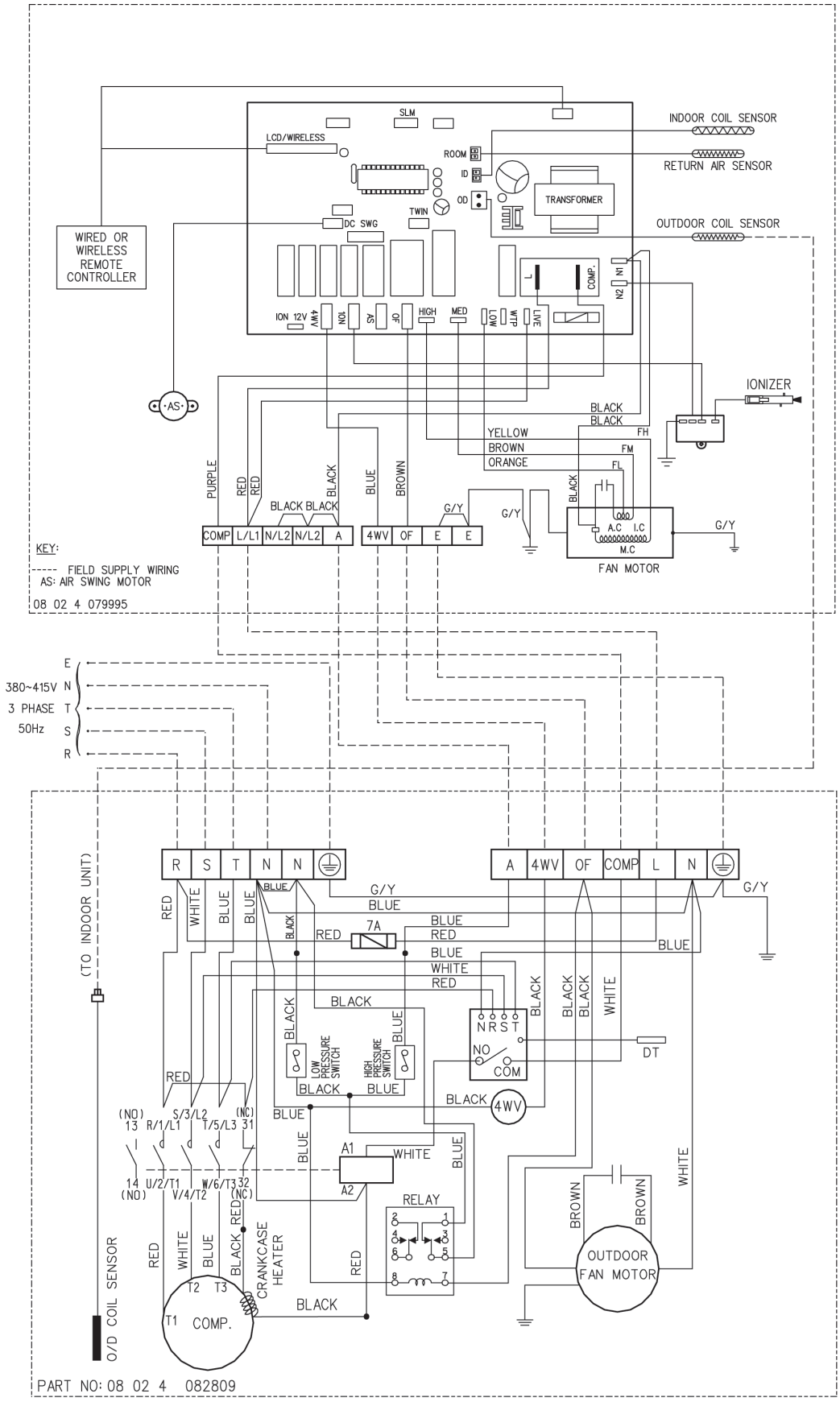
INDOOR UNIT
MODEL: A5CM 28ER



OUTDOOR UNIT
MODEL: A5LC 35CR

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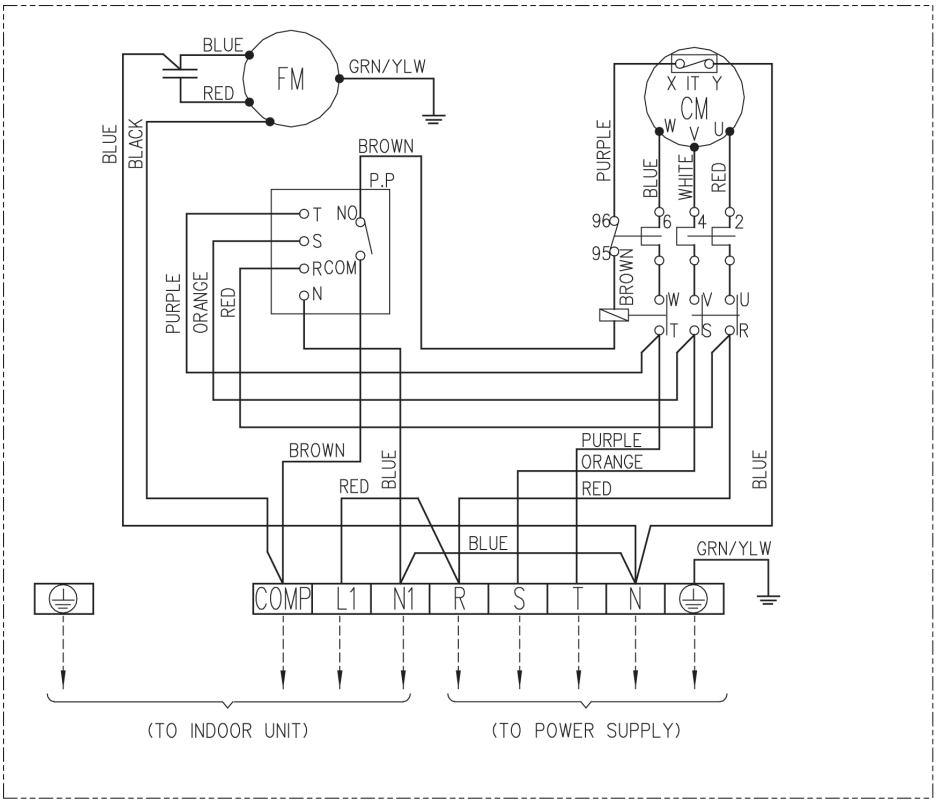
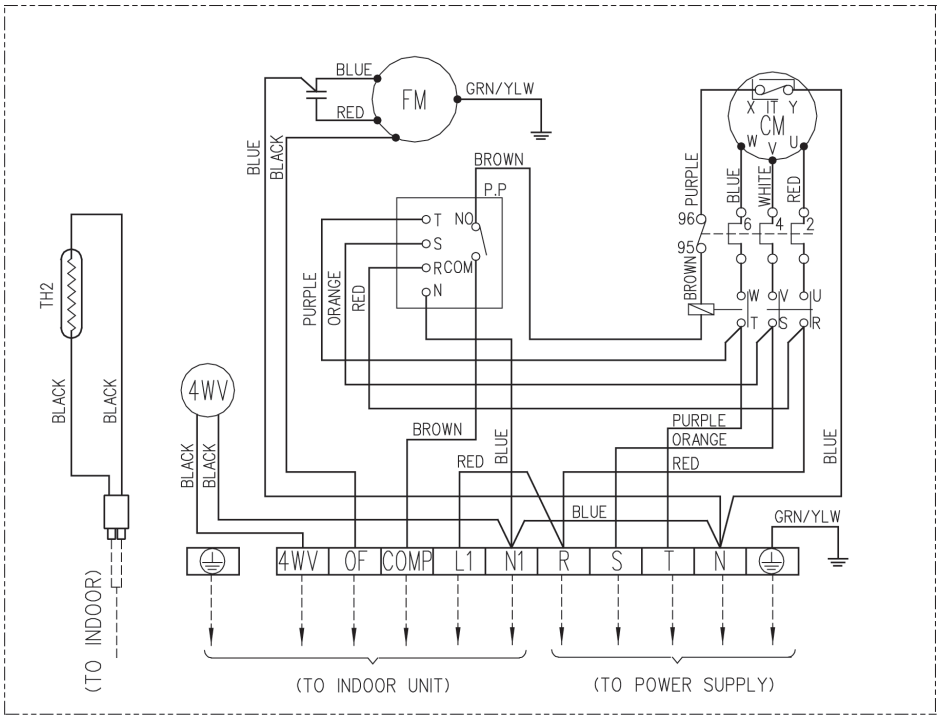
3 PHASE FOR 2 & 2.5 HP R410A OUTDOOR UNIT

MODEL: A5LC 20/25C (COOLING ONLY)
3 PHASE / 50Hz / 380 - 415V



MODEL: A5LC 20/25CR (HEAT PUMP)
3 PHASE / 50Hz / 380 - 415V



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10. SERVICING AND MAINTENANCE

Warning : Disconnect from main supply before servicing the air conditioner

The unit is designed to give long life operation with minimum maintenance required. However, it should be regularly checked and the following items should be given due attention.

Components	Maintenance Procedure	Recommended Schedule
Indoor Air Filter	1. Remove any dust adhering on the filter by using a vacuum cleaner or wash in lukewarm water (below 40°C/104°F) with a neutral cleaning detergent. 2. Rinse the filter well and dry before placing it back onto the unit. 3. **Note :Do not use gasoline, volatile substances or chemicals to clean the filter.**	At least once every 2 weeks. More frequently if necessary.
Indoor Unit	1. Clean any dirt or dust on the grille or panel by wiping it with a soft cloth soaked in lukewarm water (below 40°C/104°F) and a neutral detergent solution. 2. **Note : Do not use gasoline, volatile substances or chemicals to clean the indoor unit.**	At least once every 2 weeks. More frequently if necessary
Condensate Drain Pan and Pipe	1. Check and clean.	Every 3 months.
Indoor Fan	1. Check for unusual noise.	As necessary.
Indoor/Outdoor Coil	1. Check and remove dirt which are clogged between fins. 2. Check and remove obstacles which hinder air flow in and out of indoor/outdoor unit.	Every month. Every month.
Electrical	1. Check voltage, current and wiring. 2. Check faulty contacts caused by loose connections, foreign matters, etc.	Every 2 months. Every 2 months.
Compressor	1. No maintenance needed if refrigerant circuit remains sealed. However, check for refrigerant leak at joints and fittings.	Every 6 months.
Compressor Lubrication	1. Oil is factory charged. Not necessary to add oil if circuit remains sealed.	No maintenance required.
Fan Motors Lubrication	1. All motors pre-lubricated and sealed at factory.	No maintenance required.

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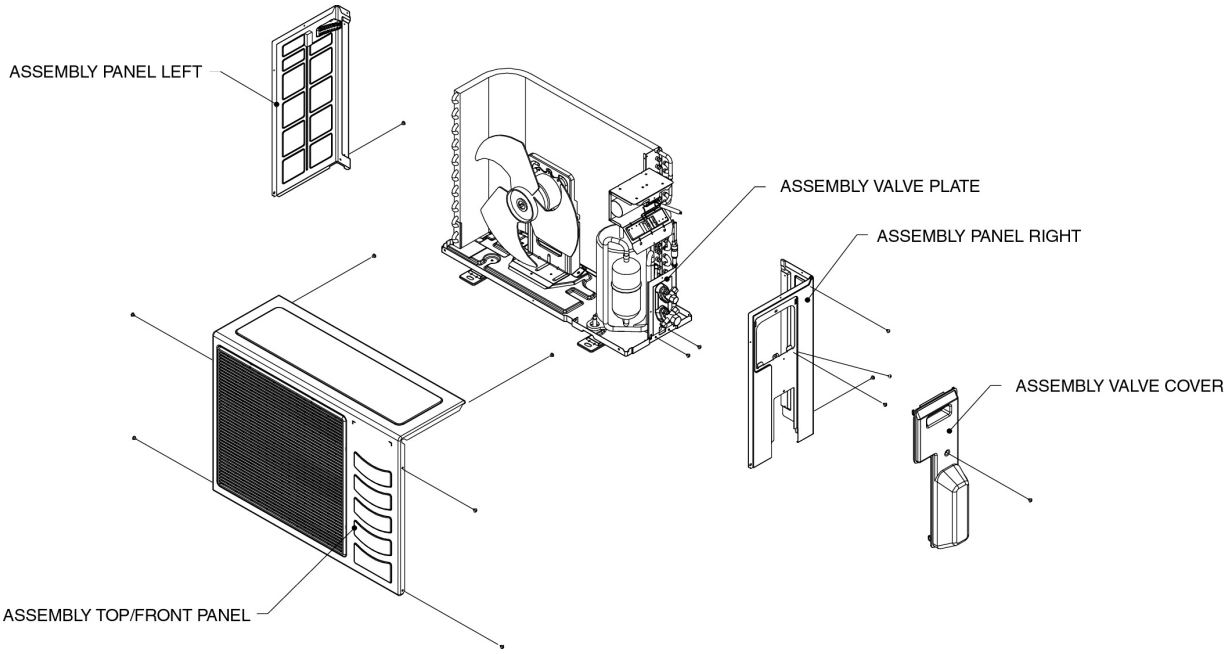
PRE START UP MAINTENANCE
(AFTER EXTENDED SHUTDOWN)

- Inspect thoroughly and clean indoor and outdoor units.
- Clean or replace air filters.
- Clean condensate drain line.
- Clean clogged indoor and outdoor coils.
- Check fan imbalance before operation.
- Tighten all wiring connections and panels.
- Check for refrigerant leakage.

The design of the ALC outdoor series allows servicing to be carried out readily and easily. The removal of the top/front and back panel make almost every part accessible.



Under normal circumstances, these outdoor units only require a check and cleaning of air intake coil surface once quarterly. However, if a unit is installed in areas subjected to much oil mist and dust, the coils must be regularly cleaned by qualified Air Conditioner Service Technicians to ensure sufficient heat exchange and proper operation. Otherwise, the systems life span may be shortened.

CAUTION!

Do not charge OXYGEN, ACETYLENE OR OTHER FLAMMABLE and poisonous gases into the unit when performing a leakage test or an airtight test. These gases could cause severe explosion and damage if exposed to high temperature and pressure.
It is recommended that only nitrogen or refrigerant be charged when performing the leakage or airtight test.

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11. TROUBLESHOOTING

When a malfunction of the air conditioner unit is detected, immediately switch off the main power supply before proceeding with the following troubleshooting procedures.
The following are common fault conditions and simple troubleshooting tips. If any other fault conditions which are not listed occur, contact your nearest local dealer. DO NOT attempt to troubleshoot the unit by yourself.

No	Fault conditions	Possible causes / corrective actions
1	The air conditioner unit will not resume after power failure.	• The auto restart function is not functioning. Please turn on the unit with the wireless / wired controller.
2	The compressor does not operate 3 minutes after the air conditioner unit is started.	• Protection against frequent starting. • Wait for 3 or 4 minutes for the compressor to start operating by it self.
3	The airflow is too slow or room cannot be cooled sufficiently.	• The air filter is dirty. • The doors and windows are opened. • The air suction and discharge of both indoor and outdoor units are clogged or blocked. • The regulated temperature or temperature setting is not low enough.
4	Discharge airflow has bad odor.	• Cigarettes, smoke particles, perfume and others, which might have adhered onto the coil, may cause odor. • Contact your nearest dealer.
5	Condensation on the front air grille of the indoor unit.	• This is caused by air humidity after an extended period of operation. • The set temperature is too low. Increase the temperature setting and operate the unit at high fan speed.
6	Water flowing out from the air conditioner.	• Switch off the unit and contact your nearest dealer. This might be due to tilted installation.
7	Hissing airflow sound from the air conditioner unit during operation.	• Liquid refrigerant flowing into the evaporator coil.
8	The wireless controller display is dim.	• The batteries are discharged. • The batteries are not correctly inserted. • The assembly is not good.
9	Compressor operates continuously.	• Dirty air filter. Clean the air filter. • Temperature setting too low (cooling). Use higher temperature setting. • Temperature setting too high (heating), Use lower temperature setting.
10	No cool air comes out during cooling cycle, or no hot air comes out during heating cycle.	• Temperature setting too high (cooling). Use lower temperature setting. • Temperature setting too low (heating). Use higher temperature setting.
11	On heating cycle, warm air does not come out.	• Unit is in defrost mode. Heating operation will resume after defrost cycle ends.

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Diagnostic Guidelines

By means of pressure reading:

Data / Circuit	Pressure					Probable cause
	Too low	A little low	Normal	A little high	Too high	
High side **Low side**					● ●	1. Overcharged with refrigerant. 2. Non-condensable gases in refrigerant circuit (e.g. air) 3. Obstructed air-intake / discharge. 4. Hot air short circuiting in outdoor unit.
High side **Low side**	●				●	1. Poor compression / no compression (compressor defective) 2. Reversing valve leaking.
High side **Low side**	 ●	●				1. Undercharged with refrigerant. 2. Refrigerant leakage. 3. Air filter clogged / dirty (indoor unit). 4. Indoor fan locked / seized. 5. Defective defrost control, outdoor coil freeze up (heating). 6. Outdoor fan locked / seized (heating).
High side **Low side**				 ●	●	1. Outdoor fan blocked (cooling). 2. Outdoor coil dirty (cooling). 3. Indoor fan locked / seized (heating). 4. Indoor air filter clogged / dirty (heating). 5. Non-condensable gases in refrigerant circuit (e.g. air)
High side **Low side**				●	 ●	1. Air intake temperature of indoor unit too high.

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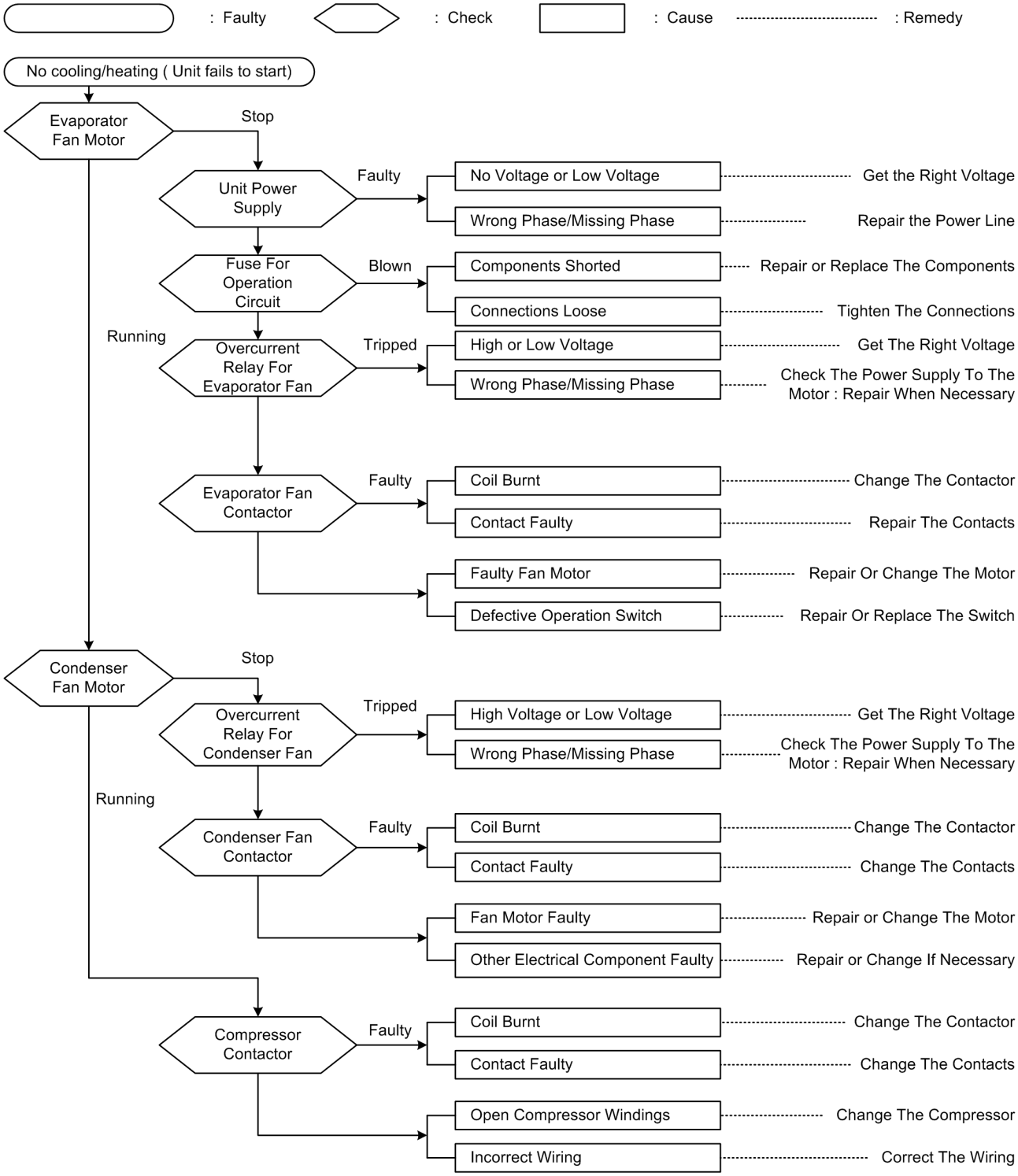
By means of diagnostic flow chart:

Generally, there are two kinds of problems, i.e. starting failure and insufficient cooling/heating. “Starting failure” is caused by electrical defect while improper application or defects in refrigerant circuit causes “Insufficient cooling / heating”.

i) Diagnosis of Electric Circuit



The most common causes of air conditioner failure to “start” are :

a) Voltage not within ±10% of rated voltage.
b) Power supply interrupted.
c) Improper control settings.
d) Air conditioner is disconnected from main power source.
e) Fuse blown or circuit breaker off.

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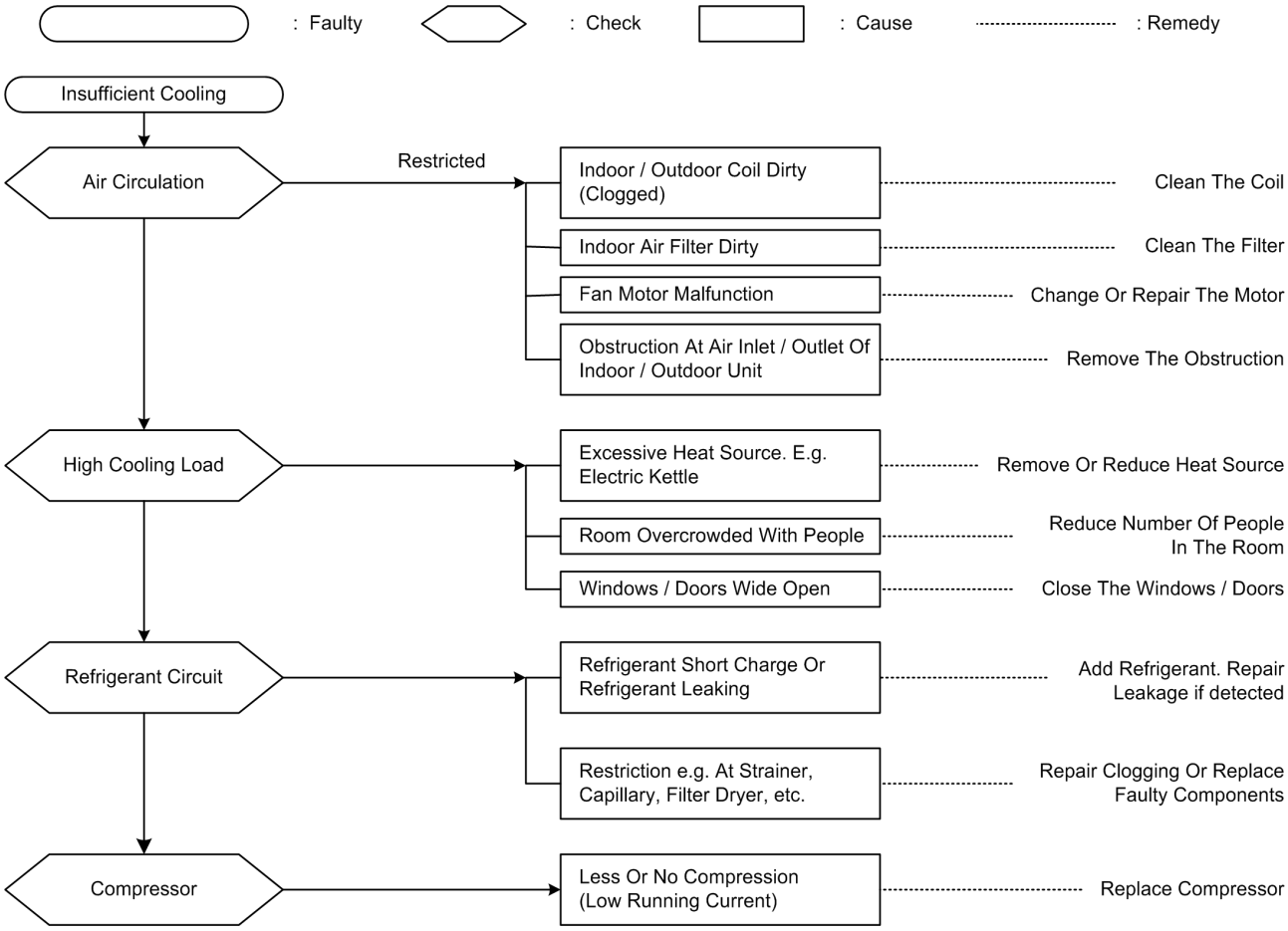
ii) Diagnosis of Refrigerant Circuit / Application

There might be some causes where the unit starts running but does not perform satisfactorily, i.e. insufficient cooling. Judgement could be made by measuring temperature difference of indoor unit's intake and discharge air as well as running current.


: Faulty
: Check
: Cause
: Remedy
Insufficient Cooling
Air Circulation
Restricted
Indoor / Outdoor Coil Dirty (Clogged)
Clean The Coil
Indoor Air Filter Dirty
Clean The Filter
Fan Motor Malfunction
Change Or Repair The Motor
Obstruction At Air Inlet / Outlet Of Indoor / Outdoor Unit
Remove The Obstruction
High Cooling Load
Excessive Heat Source. E.g. Electric Kettle
Remove Or Reduce Heat Source
Room Overcrowded With People
Reduce Number Of People In The Room
Windows / Doors Wide Open
Close The Windows / Doors
Refrigerant Circuit
Refrigerant Short Charge Or Refrigerant Leaking
Add Refrigerant. Repair Leakage if detected
Restriction e.g. At Strainer, Capillary, Filter Dryer, etc.
Repair Clogging Or Replace Faulty Components
Compressor
Less Or No Compression (Low Running Current)
Replace Compressor

Satisfactory operation with temperature difference of air intake & discharge of indoor unit 8°C to 13°C. *
(* value is for reference only)

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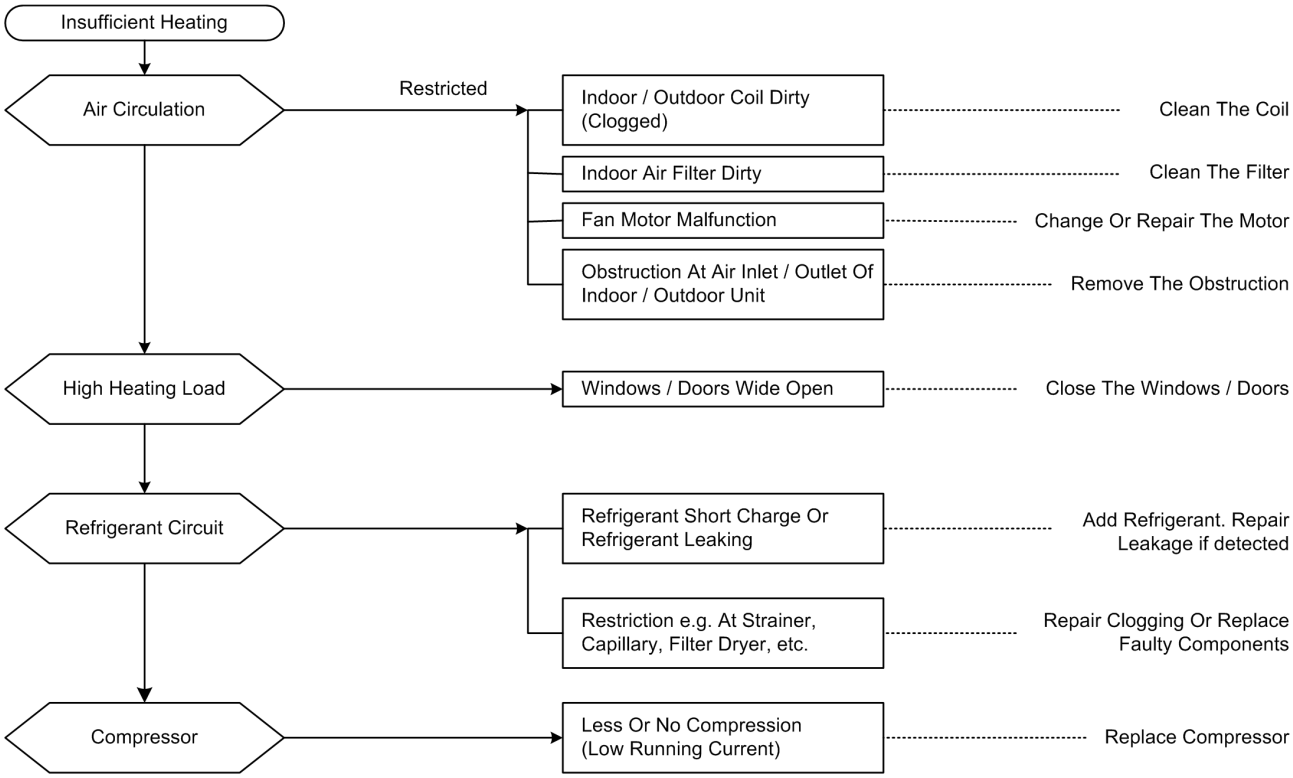
Insufficient Heating
Air Circulation
Restricted
Indoor / Outdoor Coil Dirty (Clogged)
Clean The Coil
Indoor Air Filter Dirty
Clean The Filter
Fan Motor Malfunction
Change Or Repair The Motor
Obstruction At Air Inlet / Outlet Of Indoor / Outdoor Unit
Remove The Obstruction
High Heating Load
Windows / Doors Wide Open
Close The Windows / Doors
Refrigerant Circuit
Refrigerant Short Charge Or Refrigerant Leaking
Add Refrigerant. Repair Leakage if detected
Restriction e.g. At Strainer, Capillary, Filter Dryer, etc.
Repair Clogging Or Replace Faulty Components
Compressor
Less Or No Compression (Low Running Current)
Replace Compressor

Satisfactory operation with temperature difference of air intake & discharge of indoor unit 14°C to 20°C. *
(* value is for reference only)

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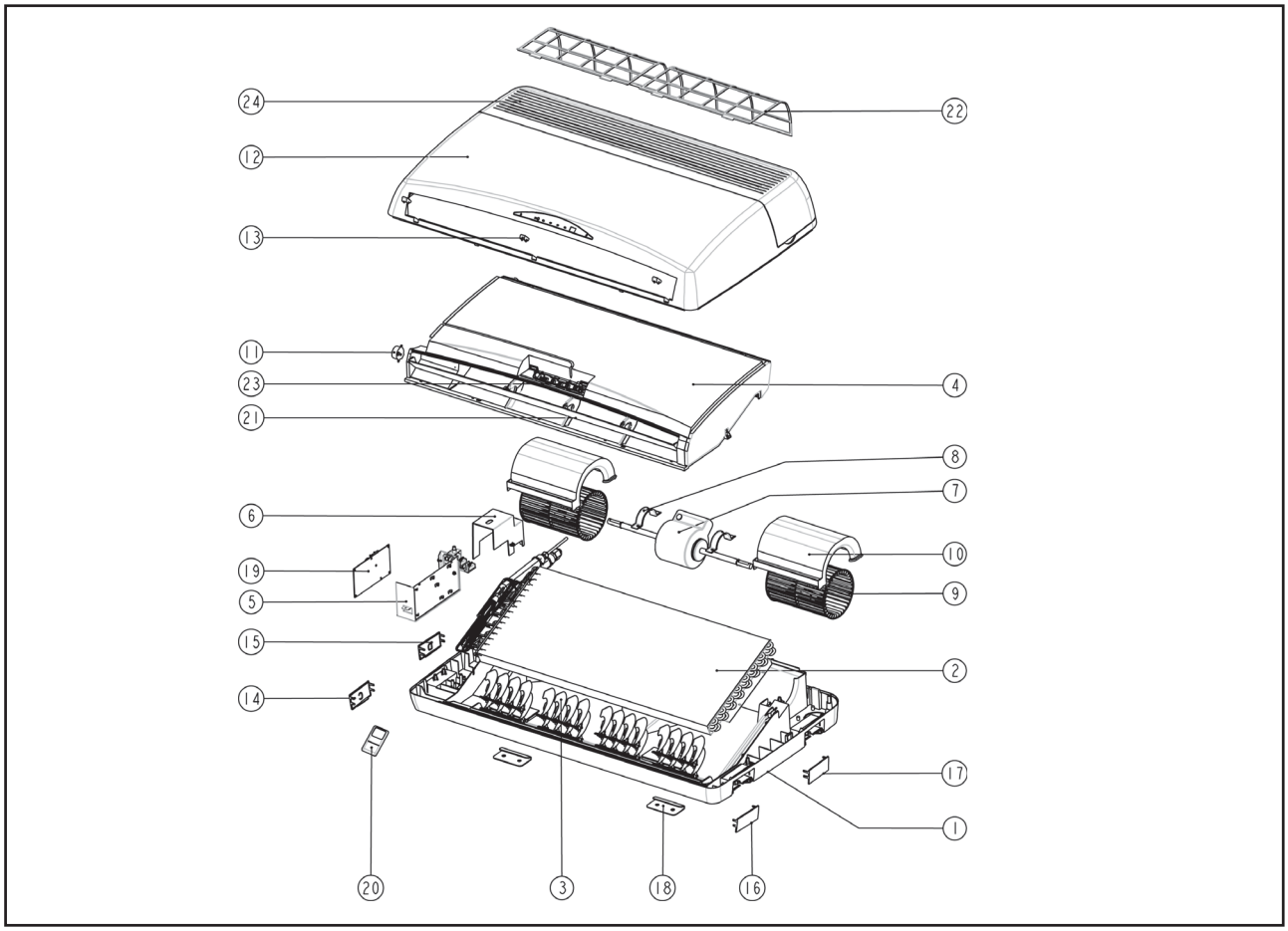
12. EXPLODED VIEW & PARTS LIST

MODEL: ACM / A5CM 15/20/25/28 E/ER



No	Description	Part No
1	Assy., Top Panel	R50124074907
2	Assy., Coil	
	ACM / A5CM 15E/ER	R50024085233
	ACM 20E/ER, A5CM 25E/ER	R50024071828
	A5CM 20E/ER	R50024080385
	ACM 25E/ER, ACM 28ER,A5CM 28E/ER	R50024074757
	ACM 28E	R50024075729
3	Assy., Vane	R50124074906
4	Assy., Drain Pan	
	ACM / A5CM 20/25/28E	R50124076123
	ACM / A5CM 20/25/28ER	R50124080076
5	Assy., Control Box	
	ACM / A5CM 15/20/25/028E (IONIZER)	R50044083484
	ACM / A5CM 20/25/28E (NTP)	R50044083700
	ACM / A5CM 15/20/25ER (IONIZER)	R50044080078
	ACM / A5CM 20/25ER (NTP)	R50044083701
	ACM / A5CM 28ER (IONIZER)	R50044080079
	ACM / A5CM 28ER (NTP)	R50044083702
6	Cover, Control Box	R01014069872
7	Motor	
	ACM / A5CM 15E/ER	R03034085800
	ACM / A5CM 20E/ER	R03039023304
	ACM / A5CM 25E/ER	R03039023305
	ACM / A5CM 28E/ER	R03039023306

No	Description	Part No
8	Motor, Bracket	R01014071324
9	Blower Wheel	R03024004754
10	Blower Housing	R12014071385
11	Motor, Air Swing	R03039023303
12	Assy., Bottom Panel	R50124074909
13	Cover, Hanger L1 (C)	R12014071354
14	Cover, Hanger L2 (D)	R12014071355
15	Cover, Hanger R1 (A)	R12014071356
16	Cover, Hanger R2 (B)	R12014071357
17	Mounting Bracket	R01014071319
18	Control Module	
	ACM / A5CM 20/25/28E (IONIZER)	R04089023399
	ACM / A5CM 20/25/28E (NTP)	R04089023670
	ACM / A5CM 20/25/28ER (IONIZER)	R04089023668
	ACM / A5CM 20/25/28ER (NTP)	R04089023667
19	G12 Handset (Cooling Only)	R04084065327
	G12 Handset (Heatpump)	R04084067315
20	Louver	R12014071335
21	Saranet Filter	R12014071342
22	Assy., LED Board	
	ACM / A5CM 20/25/28E	R50044076124
	ACM / A5CM 20/25/28ER	R50044080080
23	Air Intake Grille	R12014071341

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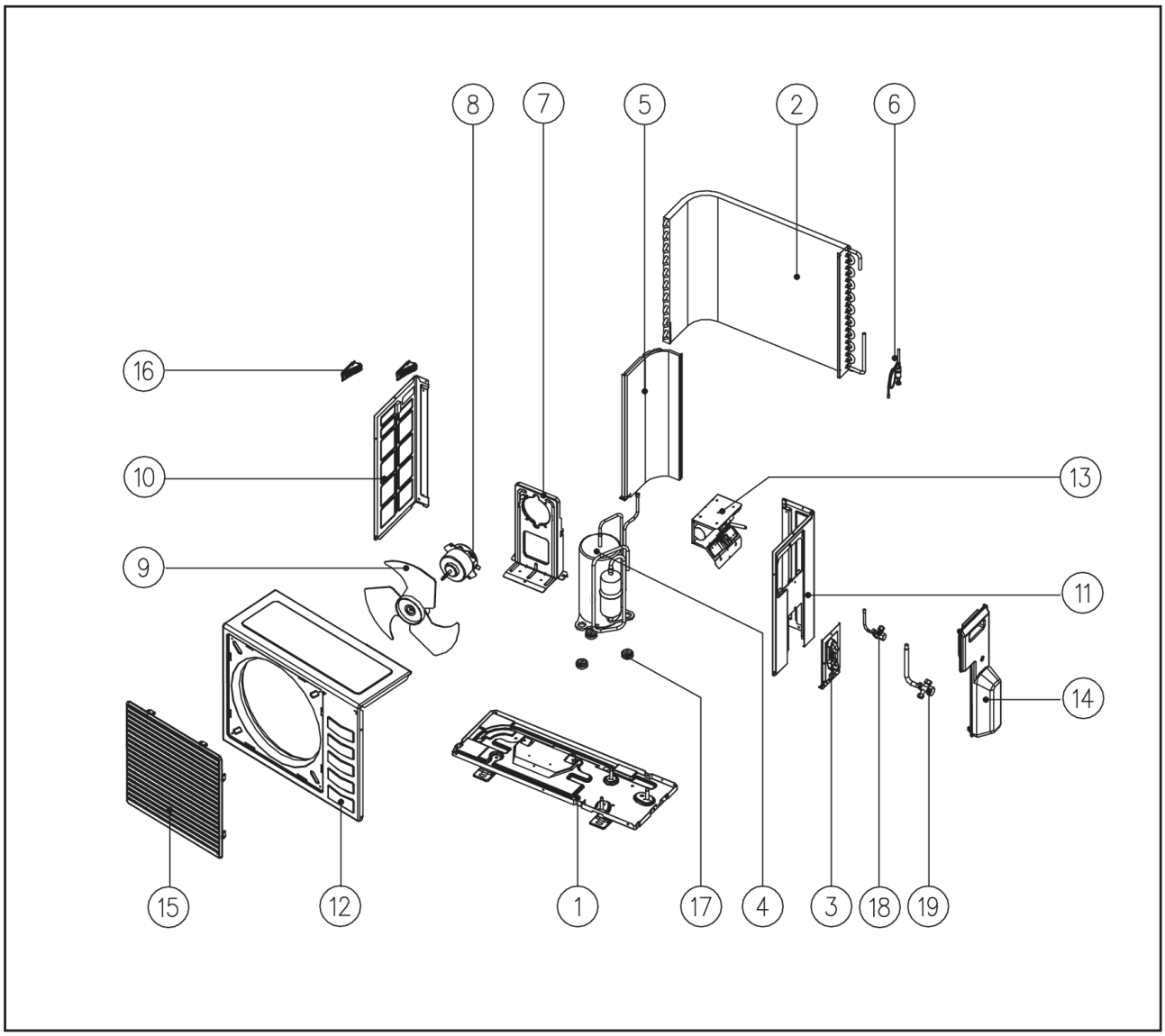
MODEL: ALC / A5LC 15C



No	Description	Part No
1	Assy. Base Pan	R50014051158
2	Assy. Outdoor Coil	
	ALC 15C	A50024087838
	A5LC 15C	R50024084998
3	Valve Bracket	R01014051164
4	Compressor	
	ALC 15C	A04019027709
	A5LC 15C	R04019026326
5	Assy., Partition	R50064055063
6	Assy., Cap Tube	R50024087757
7	Bracket, Fan Motor	R01014051162
8	Fan Motor	R03039015323
9	Fan Blade	R03019015339
10	Left Panel	R01014051166
11	Right Panel	R01014051167
12	Assy., Front Panel	R01014051171

No	Description	Part No
13	Assy., Control Panel	R50044086056
14	Assy., Valve Cover	R50124051173
15	Assy., Front Grille	R50124056700
16	Plastic Handle	R12014057948
17	Rubber Grommet	R11054000271
18	Assy., Flare Valve 2 Ways 1/4"	
	ALC 15C	R50054054950
	A5LC 15C	R50059019453
19	Assy., Flare Valve 3 Ways 1/2"	
	ALC 15C	R50054064042
	A5LC 15C	R50059019452

Parts Not in Diagram

	Capacitor, Fan Motor	R04029026755
	Capacitor, Compressor	
	ALC 15C	R04029026775
	A5LC 15C	R04029026776

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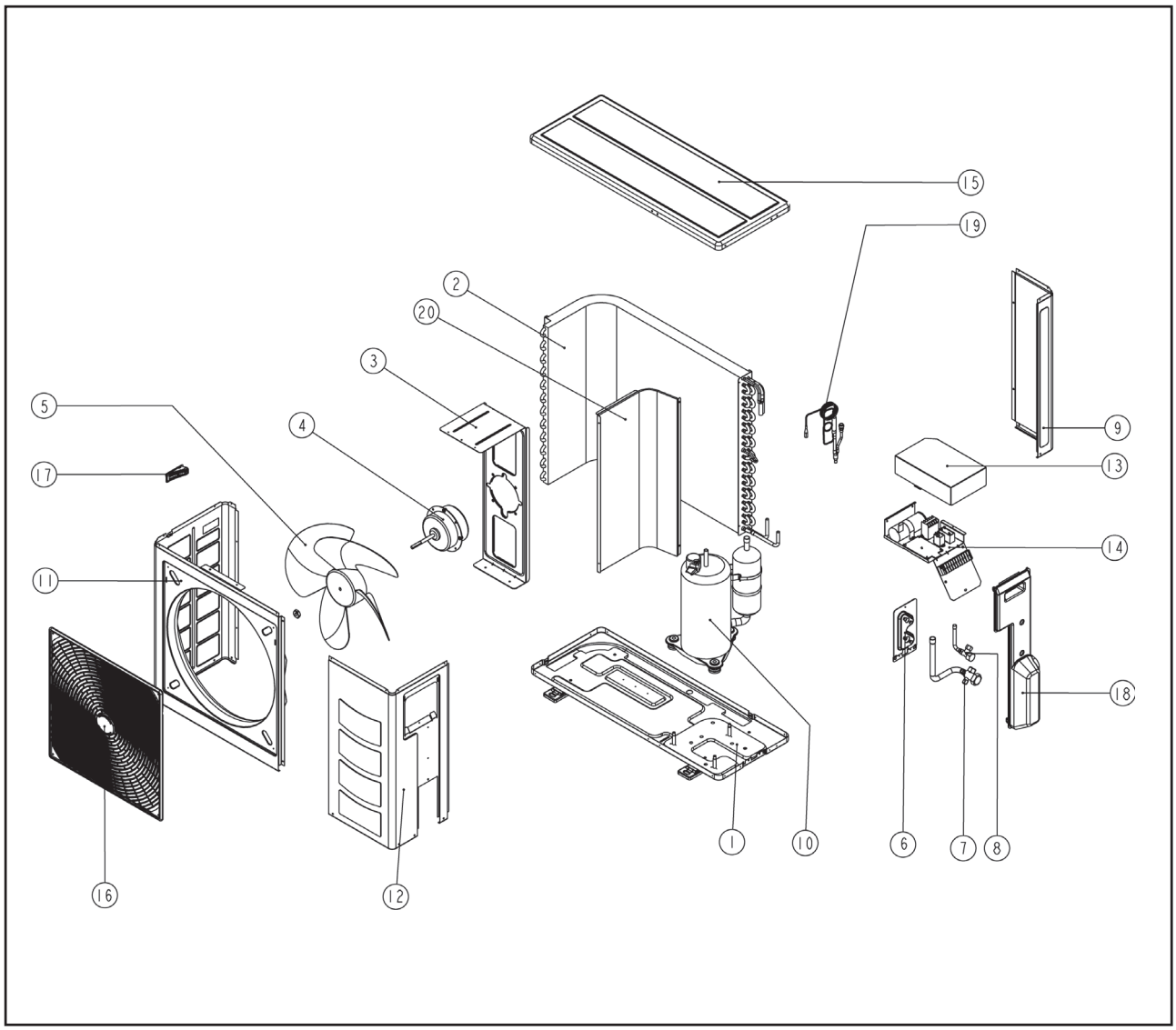
MODEL: ALC 18 / 20C, A5LC 20C



No	Description	Part No
1	Assy. Base Pan	R50014078281
2	Assy. Outdoor Coil ALC 18C ALC 20C A5LC 20C	 R50024089940 A50024084570 R50024079078
3	Motor Bracket	R01014070601
4	Fan Motor	R03039024539
5	Fan Blade	R03019023393
6	Valve Bracket ALC 18/20C A5LC 20C	 A50014072861 R50014078280
7	ALC 18/20C Assy. Flare Valve 3 Ways 5/8" A5LC 20C Assy. Flare Valve 3 Ways 1/2"	 R50054072863 R50059023335
8	Assy. Flare Valve 2 Ways 1/4" ALC 18/20C A5LC 20C	 R50059022156 R50059023334
9	Back Panel, Right	R01014070599

No	Description	Part No
10	Compressor ALC 18/20C A5LC 20C	 A04019027266 R04019020625
11	Front Panel, Left	R01014070597
12	Service Panel	R01014070598
13	Terminal Cover Panel	R01014070838
14	Assy. Control Panel	R50014072877
15	Top Panel	R01014070596
16	Assy. Front Grille	R50124072880
17	Plastic Handle	R12014057948
18	Assy. Valve Cover	R50124072885
19	Assy. Cap Tube ALC 18C ALC 20C A5LC 20C	 R50024089926 A50024087066 R50024081921
20	Partition	R01014070603

Parts Not in Diagram

	Capacitor, Fan Motor	R04029026759
	Capacitor, Compressor ALC 18/20C A5LC 20C	 R04029026782 R04029026779

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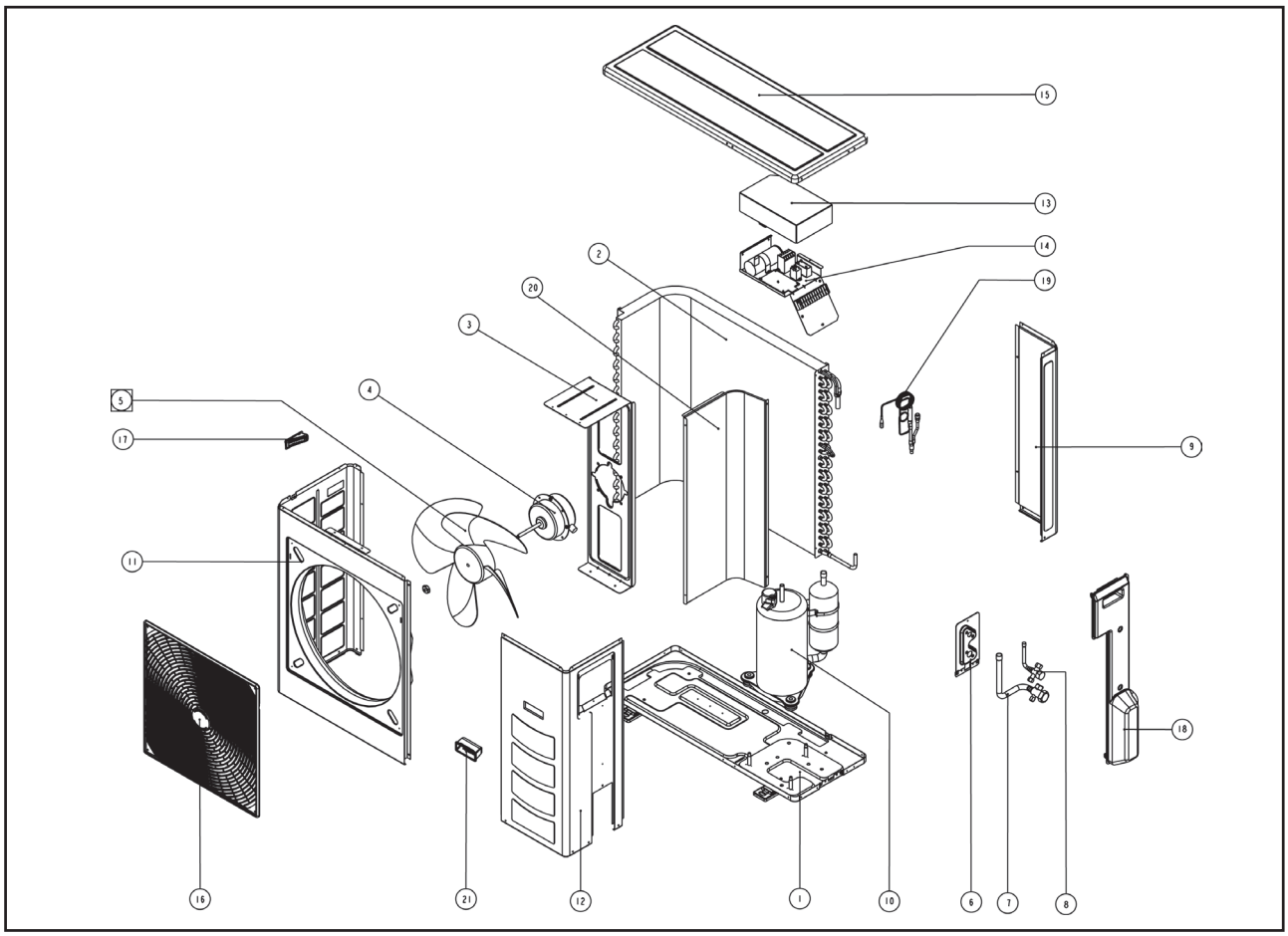
MODEL: ALC / A5LC 25 / 28C



No	Description	Part No
1	Assy. Base Pan	R50014073884
2	Assy. Outdoor Coil	
	ALC 25C	R50024089206
	A5LC 25/28C	R50024079238
	ALC 28C	A50024070959
3	Motor Bracket	R01014070948
4	Fan Motor	
	ALC 25C	R03039028207
	A5LC 25C	R03039023391
	ALC / A5LC 28C	R03039024538
5	Fan Blade	R03019023393
6	Valve Bracket	
	ALC 25/28C	A50014073890
	A5LC 25C	R50014078321
	A5LC 28C	R50014080371
7	Assy. Flare Valve 3 Ways 5/8"	
	ALC 25/28C	R50054072863
	A5LC 25/28C	R50059023336
8	ALC 25/028C	
	Assy. Flare Valve 3 Ways 3/8"	R50059022577
	A5LC 25C	
	Assy. Flare Valve 2 Ways 1/4"	R50059023334
	A5LC 28C	
	Assy. Flare Valve 3 Ways 3/8"	R50059024820
9	Back Panel, Right	R01014070950

No	Description	Part No
10	Compressor	
	ALC 25C	A04019027570
	A5LC 25C	R04019021361
	ALC 28C	R04019012828
	A5LC 28C	R04019020449
11	Front Panel, Left	R01014070947
12	Service Panel	R01014070949
13	Terminal Cover Panel	A01014070838
14	Assy. Control Panel	
	ALC / A5LC 25C	R50044086076
	ALC 28C	R50044086137
	A5LC 28C	R50044086138
15	Top Panel	R01014070596
16	Assy. Front Grille	R50124072880
17	Plastic Handle, Side	R12014057948
18	Assy. Valve Cover	R50124073905
19	Assy. Cap Tube	
	ALC 25C	R50024090095
	A5LC 25C	R50024081916
	A5LC 28C	R50024079593
20	Partition	R01014070951
21	Plastic Handle, Front	R12014070955

Parts Not in Diagram

	Capacitor, Fan Motor	
	ALC / A5LC 25C	R04029026759
	ALC / A5LC 28C	R04029026966
	Capacitor, Compressor	
	ALC / A5LC 25C, ALC 28C	R04029026779
	A5LC 28C	R04029026778

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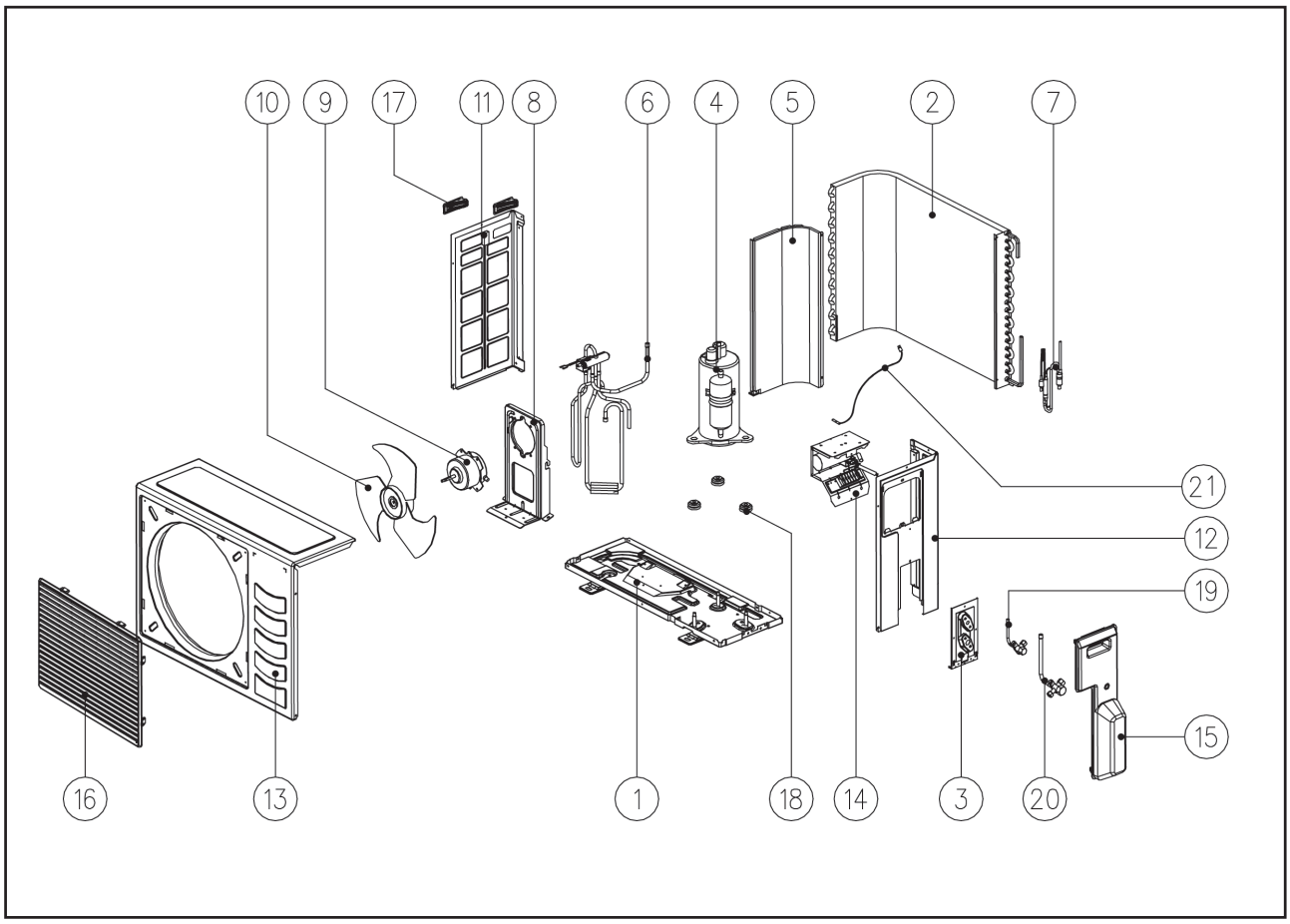
MODEL: ALC / A5LC 15CR



No	Description	Part No
1	Assy. Base Pan	R50014051158
2	Assy. Outdoor Coil	
	ALC 15CR	A50024086953
	A5LC 15CR	R50024084998
3	Valve Bracket	R01014051164
4	Compressor	
	ALC 15CR	R04019019125
	A5LC 15CR	R04019026326
5	Assy., Partition	R50064055063
6	Assy., 4 Way Valve	
	ALC 15CR	A50024087158
	A5LC 15CR	R50024084737
7	Assy., Cap Tube	
	ALC 15CR	A50024087023
	A5LC 15CR	R50024084738
8	Bracket, Fan Motor	R01014051162
9	Fan Motor	R03039015323
10	Fan Blade	R03019015339

No	Description	Part No
11	Left Panel	R01014051166
12	Right Panel	R01014051167
13	Assy., Front Panel	R01014051171
14	Assy., Control Panel	R50044086063
15	Assy., Valve Cover	R50124051173
16	Assy., Front Grille	R50124056700
17	Plastic Handle	R12014057948
18	Rubber Grommet	R11054000271
19	Assy., Flare Valve 2 Ways 1/4"	
	ALC 15CR	R50054054950
	A5LC 15CR	R50059019453
20	Assy., Flare Valve 3 Ways 1/2"	
	ALC 15CR	R50054064042
	A5LC 15CR	R50059019452
21	Sensor, Outdoor Defrost	R50134039416

Parts Not in Diagram

	Capacitor, Fan Motor	R04029026755
	Capacitor, Compressor	R04029026776

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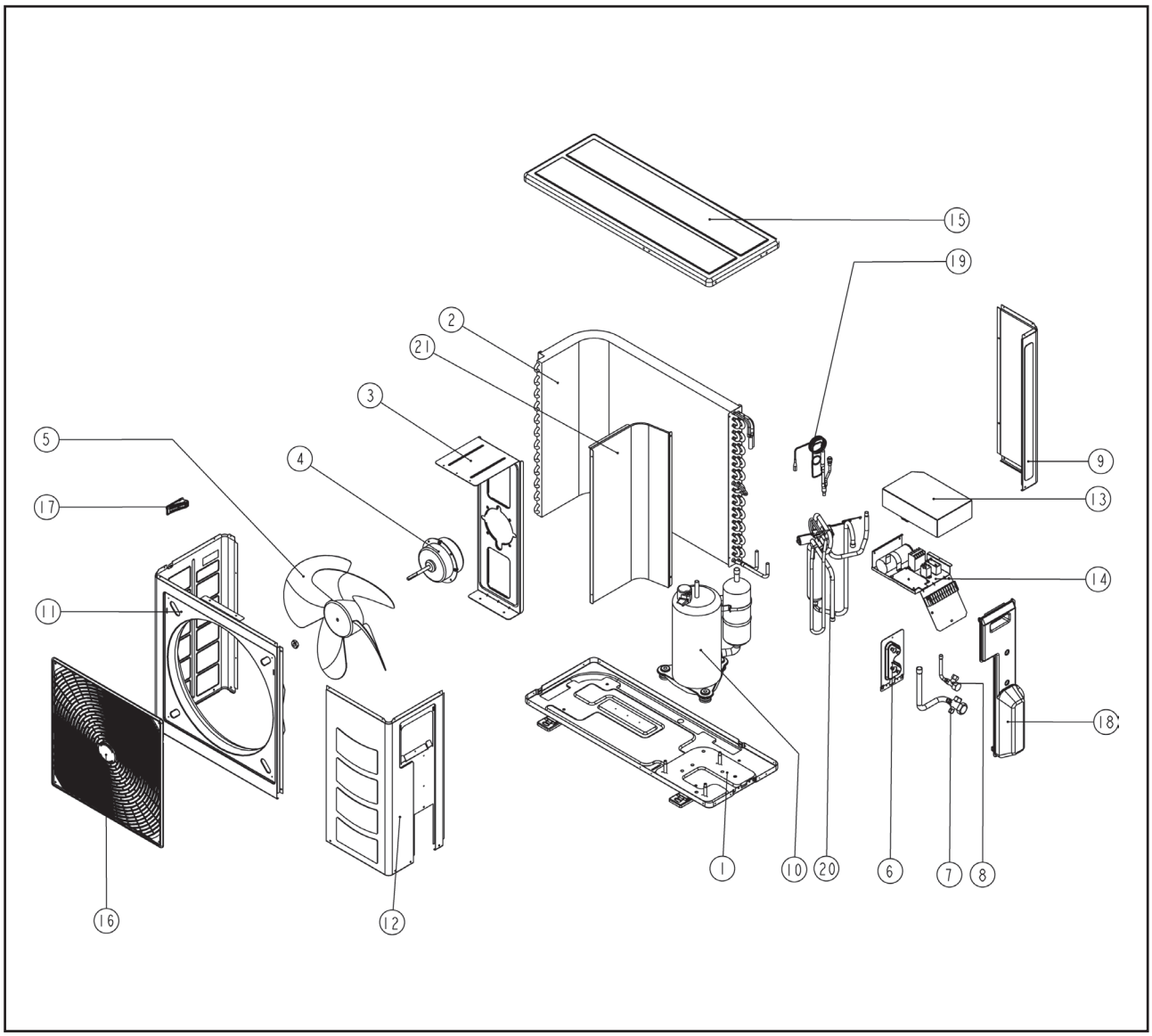
MODEL: ALC 18CR, ALC / A5LC 20CR



No	Description	Part No
1	Assy. Base Pan	R50014078281
2	Assy. Outdoor Coil	
	ALC 18CR	R50024090296
	ALC / A5LC 20CR	R50024075143
3	Motor Bracket	R01014070601
4	Fan Motor	R03039024539
5	Fan Blade	R03019023393
6	Valve Bracket	
	ALC 18/20CR	A50014072861
	A5LC 20CR	R50014078280
7	ALC 18/20CR	
	Assy. Flare Valve 3 Ways 5/8"	R50054072863
	A5LC 20CR	
	Assy. Flare Valve 3 Ways 1/2"	R50059023335
8	Assy. Flare Valve 2 Ways 1/4"	
	ALC 18/20CR	R50059022156
	A5LC 20CR	R50059023334
9	Back Panel, Right	R01014070599
10	Compressor	
	ALC 18/20CR	A04019027266
	A5LC 20CR	R04019020625

No	Description	Part No
11	Front Panel, Left	R01014070597
12	Service Panel	R01014070598
13	Terminal Cover Panel	R01014070838
14	Assy. Control Panel	R50014072877
15	Top Panel	R01014070596
16	Assy. Front Grille	R50124072880
17	Plastic Handle	R12014057948
18	Assy. Valve Cover	R50124072885
19	Assy. Cap Tube	
	ALC 18CR	R50024089931
	ALC 20CR	R50024087058
	A5LC 20CR	R50024081904
20	Assy. 4 Way Valve	
	ALC 18/20CR	R50054077222
	A5LC 20CR	R50059024520
21	Partition	R01014070603

Parts Not in Diagram

	Capacitor, Fan Motor	R04029026759
	Capacitor, Compressor	
	ALC 18/20CR	R04029026782
	A5LC 20CR	R04029026779

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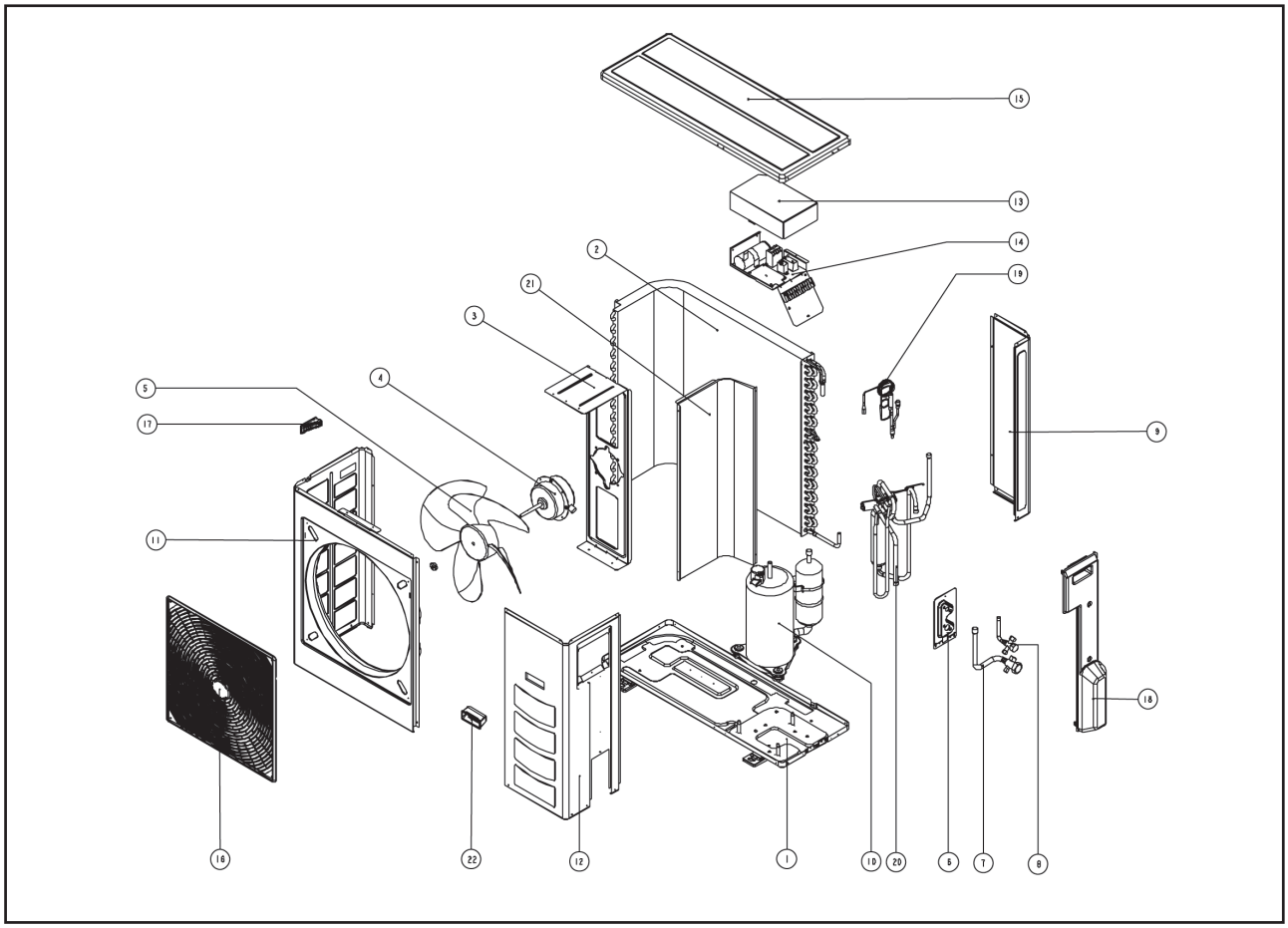
MODEL: ALC / A5LC 25 / 28CR



No	Description	Part No
1	Assy. Base Pan	R50014073884
2	Assy. Outdoor Coil	
	ALC 25CR	R50024088731
	A5LC 25/28CR	R50024075147
	ALC 28CR	A50024082133
3	Motor Bracket	R01014070948
4	Fan Motor	
	ALC 25CR	R03039028207
	A5LC 25CR	R03039023391
	ALC / A5LC 28CR	R03039024538
5	Fan Blade	R03019023393
6	Valve Bracket	
	ALC 25/28CR	A50014073890
	A5LC 25CR	R50014078321
	A5LC 28CR	R50014080371
7	Assy. Flare Valve 3 Ways 5/8"	
	ALC 25/28CR	R50054072863
	A5LC 25/28CR	R50059023336
8	ALC 25/28CR	
	Assy. Flare Valve 3 Ways 3/8"	R50059022577
	A5LC 25CR	
	Assy. Flare Valve 2 Ways 1/4"	R50059023334
	A5LC 28CR	
	Assy. Flare Valve 3 Ways 3/8"	R50059024820
9	Back Panel, Right	R01014070950
10	Compressor	
	ALC 25CR	A04019027570
	A5LC 25CR	R04019021361
	ALC 28CR	R04019012828
	A5LC 28CR	R04019020449

No	Description	Part No
11	Front Panel, Left	R01014070947
12	Service Panel	R01014070949
13	Terminal Cover Panel	R01014070838
14	Assy. Control Panel	
	ALC / A5LC 25CR	R50044086136
	ALC 28CR	R50044086139
	A5LC 28CR	R50044086140
15	Top Panel	R01014070596
16	Assy. Front Grille	R50124072880
17	Plastic Handle, Side	R12014057948
18	Assy. Valve Cover	R50124073905
19	Assy.Cap Tube	
	ALC 25CR	R50024088789
	A5LC 25CR	R50024081899
	ALC 28CR	A50024080186
	A5LC 28CR	R50024080312
20	Assy. 4 Way Valve	
	ALC 25/28CR	R50054077222
	A5LC 25/28CR	R50059024520
21	Partition	R01014070951
22	Plastic Handle, Front	R12014070955

Parts Not in Diagram

	Capacitor, Fan Motor	
	ALC /A5LC 25CR	R04029026759
	ALC /A5LC 28CR	R04029026966
	Capacitor, Compressor	
	ALC /A5LC 25CR, ALC 28CR	R04029026779
	A5LC 28CR	R04029026778

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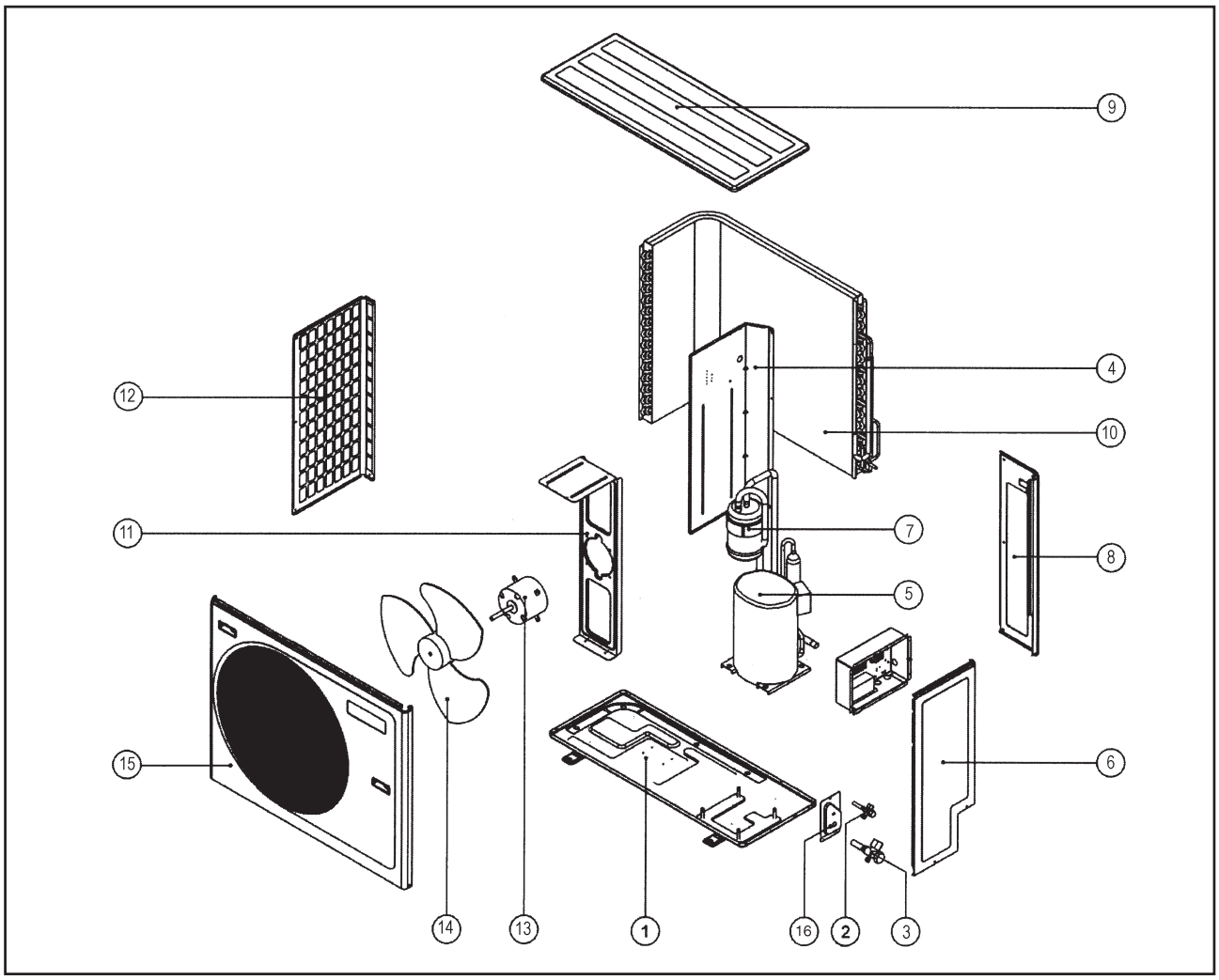
MODEL: ALC 30C/CR, A5LC 35 C/CR



No	Description	Part No
1	Assy. Base Pan	R50014053238
2	Assy. Flare Valve 3/8"	
	ALC 30C/CR	R50059000221
	A5LC 35C/CR	R50059017536
3	Assy. Flare Valve 5/8"	
	ALC 30C/CR	R50059000071
	A5LC 35C/CR	R50059020805
4	Panel, Partition	R50014053277
5	Compressor	
	ALC 30C/CR	
	220-240V/1PH/50Hz	R50049013221
	380-415V/3PH/50Hz	R50049019889
	A5LC 35C/CR	
	220-240V/1PH/50Hz	R50049025547
	380-415V/3PH/50Hz	R50049025336
6	Service Panel	R01010029898
7	Accumulator	
	ALC 30C/CR	R02119025988
	A5LC 35C/CR	R02119024262
8	Back Panel, Right	R01014053233
9	Top Panel	R01011029900
10	Assy. Coil	
	ALC 30C	A50024041851
	ALC 30CR	A50024035282
	A5LC 35C/CR	R50024082878

No	Description	Part No
11	Bracket, Fan Motor	R01014053232
12	Side Panel, Left	R01010029899
13	Fan Motor	R03039004046
14	Fan Blade	R03013028160
15	Assy. Front Panel	R50014053236
16	Plate, Flare Vlave	R01013034235

Parts Not in Diagram

	Phase Sequencer	R04089017029
	High Pressure Switch	
	ALC 30C/CR	R04109015136
	A5LC 35C/CR	R04104061879
	Low Pressure Switch	
	ALC 30C	R04109015125
	A5LC 35C/CR	R04109015400
	Assy. 4 Way Valve	
	ALC 30CR	R05029001991
	A5LC 35CR	R50024087051
	Capacitor, Fan Motor	R04029026761
	Capacitor, Compressor	
	ALC 30C/CR	R04029026779
	A5LC 35C	R04029026782
	TXV	R05019020252

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